APRIL 1959

CONCRETE

Ready Mixed Concrete Convention Report

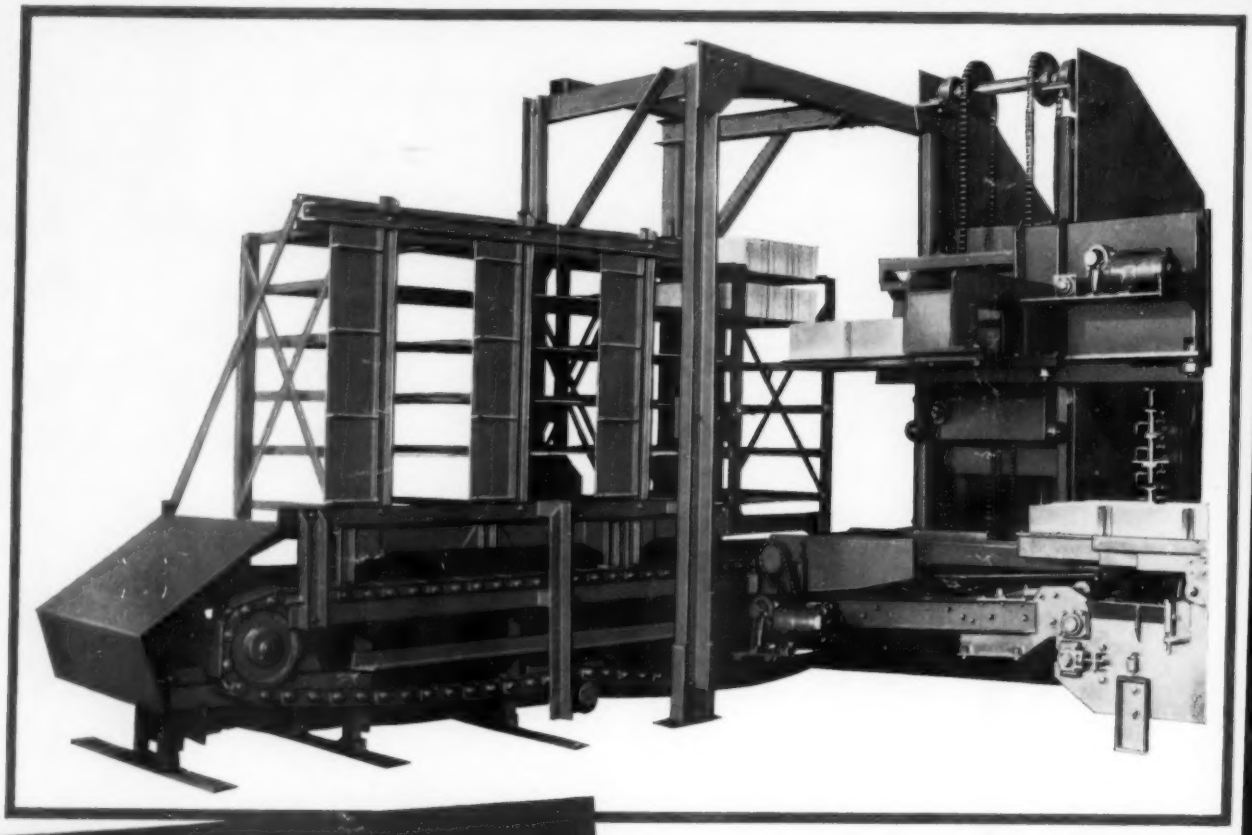
(page 16)

Autoclavers Meet In Toledo; 110 H. P. Plants Now Operating

(page 26)

Ready Mix And Prestressed Casting A Natural!

®RACKMAN by GOCORP...AUTOMATIC RACK LOADER HANDLES BLOCKS AS FAST AS YOU CAN MAKE 'EM!



The only rack loader proven by more than two years in the field

PAT'S PENDING

HIGHER PRODUCTION . . . FEWER CULLS

RACKMAN is keyed directly to the cycle of your block machine for continuous auto-operation • **RACKMAN** speeds production of any block machine even **GOCORP's "SUPER" TRUSTEE** (there is no faster machine on the market) • No time outs due to the human factor • No offbearing culls • Smooth, efficient, economical operation from mixer to rack • **NO PITS REQUIRED** • Compact design uses minimum floor space.

A companion piece to the RACKMAN "Loader" is the RACKMAN "Unloader".

RACKMAN AUTOMATICALLY removes green blocks from your block machine and indexes them gently onto the decks of the rack.

RACKMAN AUTOMATICALLY removes empty pallets and returns them to the front pallet feeder of the block machine.

RACKMAN AUTOMATICALLY shifts racks. Your lift truck operator merely puts on the empty racks (with pallets) and takes off the loaded ones.

RACKMAN may be used with most high production machines.

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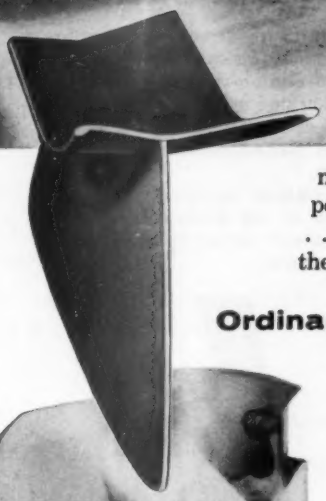

material out of the mass . . . the mixing fin pours material into the center of the drum . . . it's the "T" that mixes to the test . . . there is *no segregation* in the mix.

Ordinary "L" blade can't mix or pour efficiently . . .

because material slides off the blade as it comes out of the mass . . . there is no mixing fin to lift material into the center of the drum . . . churning instead of mixing action results.

discharges (low slump) concrete faster than any other truck mixer!

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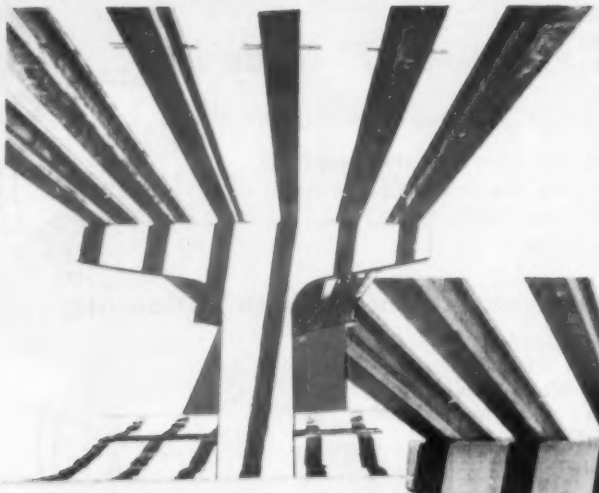
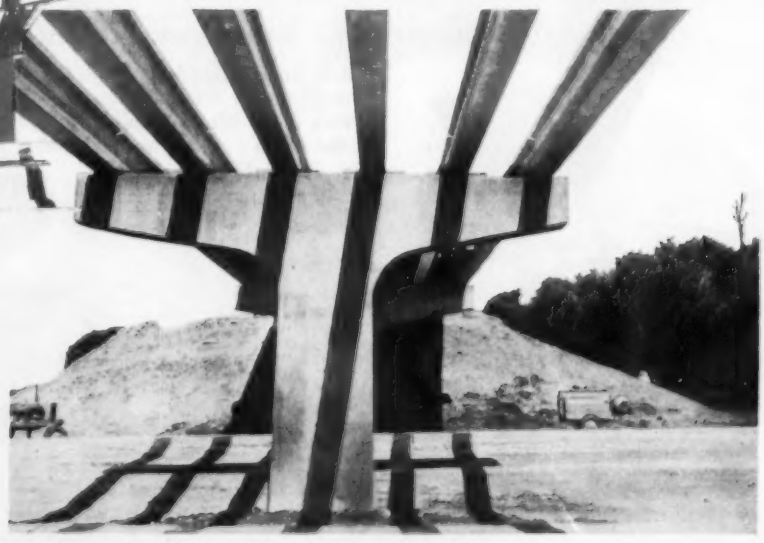


Prestressed concrete structural members have greatly increased spans and supportable loads, revolutionizing structural design. The Iowa bridge structure shown here is one example of how prestressed concrete beams can be placed on reinforced concrete supports.

Penn-Dixie cement is widely and successfully used in the manufacture of all types of concrete including prestressed concrete members.



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For more information use postcard facing page 48.

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FEATURES FOR THIS MONTH

NRMCA 29th Annual Convention Report 16

Concern over uneconomic plant expansion, increasing labor costs, and better public and customer relations shared the spotlight with at least one most encouraging report on the direction ready mixed concrete can take in getting a larger share of the paving business.

Ready Mixed Concrete In Highway Pavements 23

George R. Bathe, Ready Mixed Concrete Co., Omaha, Nebr., tells how his company has delivered, per hourly contract schedule, between 70 and 125 cu. yds. of 2-inch maximum slump concrete to three separate stretches of highway construction. He also tells in detail the steps that must be taken to get this kind of business.

Autoclavers Meet at Toledo 26

Last year's predicted increase in autoclave block plants has been exceeded by a substantial margin. There are now 110 such plants in the U. S. and Canada. Here is a complete report on this year's convention. By Hubert C. Persons.

Profits In The Ready Mixed Business — Editorial 15

An examination of the relationship between reduced profit margins being experienced by many ready mixed concrete producers and price wars in the light of recent industry statistics in the areas most notably affected.

DONALD T. PAPINEAU
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Circulation Manager

DEPARTMENTS

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T-11

BIG BUSINESS

Ready-Made Markets Await Local Manufacturers of Concrete Drain Tile

Many millions of concrete drain tile are annually produced — for a variety of uses — by a chain of local plants, each operating to supply regional demands, and under economic conditions most favorable to low-cost production and high-income potentials. Today's demands and tomorrow's sale possibilities are expanding much faster than productive capacities, and opportunities are open for many more local sources of supply. This has tremendous interest for those now manufacturing other concrete products because it's a low-investment opportunity.

This unretouched photograph shows representative examples of drain tile. Clay tile is at left; concrete tile at right. Note the roundness, cleanness and ribbed heft of the concrete tile. Also note the absence of distortion and shaling.

The Champion is backgrounded by fifty years of drain tile machine building. Compact, simple, low priced. With automatic feeder, it reduces manufacturing to a one-man operation. Makes all sizes 3" to 12" diameter. Write for descriptive literature and other interesting information.

W. E. DUNN MFG. CO.
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Calendar . . .

APRIL 3-4, 1959	Mid-West Ready Mixed Concrete Association — 17th Annual Convention — Edgewater Beach Hotel, Chicago, Ill.
APRIL 12-14, 1959	Texas Concrete Masonry Association — Semi-Annual Meeting — Driskill Hotel, Austin, Texas.
APRIL 23-25, 1959	Texas Aggregates Association and Texas Ready Mixed Concrete Association — 5th Annual Joint Convention — Shamrock Hilton Hotel, Houston, Texas.
MAY 17-19, 1959	Empire State Sand, Gravel and Ready Mix Association — 8th Annual Convention — Sheraton-Brock Hotel, Niagara Falls, Ont., Canada.
MAY 25-26, 1959	Wire Reinforcement Institute — Annual Spring Meeting — The Greenbrier, White Sulphur Springs, W. Va.
MAY 25-30, 1959	Concrete Reinforcing Steel Institute — Annual Meeting — The Greenbrier, White Sulphur Springs, W. Va.
JUNE 14-16, 1959	Florida Concrete & Products Association — 5th Annual Convention — Key Biscayne Hotel, Miami, Florida.
JUNE 17-20, 1959	Expanded Clay & Shale Association — Annual Mid-Year Meeting — Hotel Commodore, New York, N. Y.
JUNE 18-20, 1959	New York State Concrete Masonry Association — Mid-Year Meeting — Rocky Point Inn, Inlet, New York.
AUGUST 10-12, 1959	National Cinder Concrete Products Association — Conference of Lightweight Concrete Block Manufacturers — Chalfonte-Haddon Hall Hotel, Atlantic City, New Jersey.
NOVEMBER 2-6, 1959	Prestressed Concrete Institute — 5th Annual Convention — Deauville Hotel, Miami Beach, Fla.
DECEMBER 6-7, 1959	South Carolina Concrete Masonry Association — Annual Convention — Columbia Hotel, Columbia, S. C.

FROM THE NEWS DESK

Wisconsin Products Men Honor W. D. "Kim" Kimmel

Elvin G. Atkinson, left in the accompanying photograph, president of the Wisconsin Concrete Products Assn., is shown presenting Mr. W. D. Kimmel, district engineer of the Portland Cement Association in Milwaukee, with a bronze plaque making him a lifetime member in the association.

This award was the result of his outstanding assistance and cooperation with the association over many years. The presentation took place at the recent WCPA annual convention banquet held at the Plankinton Hotel in Milwaukee. "Kim" as he is known to his many friends, received a standing ovation.

■

Ohio Block Producers Elect New Officers

Elected at the sixth annual convention of the Ohio Concrete Block Association at Columbus are the new officers, left to right in the accompanying photograph: Ray H. Deemer, manager of block division, The Dayton Builders Supply Co., Dayton, first vice president; Harold Snider, president and general manager of Greenville Concrete Products, Inc., Greenville, and Miami Valley Concrete Products, Troy, president; William A. Fasnacht, president of Owen Concrete Products, Inc., Akron, second vice president; and Harry E. Whitlatch, partner in Scioto Building Units, Portsmouth, treasurer. John F. Royer, Columbus, was renamed secretary. Mr. Snider was re-elected to the board of trustees, and Mr. Fasnacht and Mr. Deemer were elected. Others elected trustees were Warren R. Fellabaum, vice president of National Cement Products Co., Toledo, Harry R. Engster, secretary of The Trumbull Cement Products Co., Warren, and E. L. Dooley, general manager of Steward & Silver, Columbus.

■

PCA Opens Arizona Office in Phoenix

The Portland Cement Association has announced the opening of a new district office in Phoenix, Arizona, with George M. Petzar, formerly of the Los Angeles office as district engineer.

G. M. PETZAR

Located initially at 213 North First Avenue, the new Phoenix office will permit better service to cement users in the state of Arizona, which heretofore has been served by the association's Los Angeles district office.

George M. Petzar is a civil engineering graduate of the California Institute of Technology. He joined the association in 1954 as a general field engineer, working in concrete and soil-cement paving, conservation and other fields of cement use. Since 1956, he has specialized in technical service in the field of housing. Before joining the association, he had been a structural designer for C. F. Braun and Co., consulting engineers of Alhambra, Calif., and an assistant plant engineer for American Smelting and Refining Co., Salt Lake City. From 1942 to 1945, he served as a pilot in the U.S. Navy Air Corps. Mr. Petzar is a member of a number of professional organizations, including

the American Society of Civil Engineers, the American Concrete Institute and the Home Builders' Institute, and is a registered professional engineer in Utah and California.

Gene R. Morris, general field engineer in the Tucson area, will continue in that capacity. Mr. Morris is a civil engineering graduate of the University of Arizona and a registered professional engineer in Arizona. Before joining the Association, he worked for the Arizona State Highway Department and the Hughes Aircraft Co. A second field engineer will be added to the Phoenix office staff.

■

Tod Johnston New United Concrete Pipe Executive

Tod Johnston, who is widely known in engineering circles of the waterworks and sewage fields, has been appointed general manager of United Concrete Pipe Corporation's northwest operations, according to an announcement by Lloyd Earl, United's president.

TOD JOHNSTON

Mr. Johnston's responsibilties will include operations of the Auburn, Wash., plant manufacturing concrete pipe and steel fabrication, and three other pipe plants in eastern Washington as well as sales activities.

Mr. L. A. Warren, former manager will temporarily assist Johnston before returning to United's Baldwin Park, Calif., plant for a new assignment.

John W. Winkworth Wins Huron Achievement Award

Winner of the second annual Huron Achievement Award, given by the Huron Portland Cement Company, is John W. Winkworth, right in the accompanying photograph, president of the Michigan Ready Mix Concrete Association. Presenting the award at

a recent meeting of the Concrete Improvement Board in the Rackham Building, Detroit, is Peter Antonich, assistant to the director of technical services of Huron Portland Cement Company.

Mr. Winkworth, secretary of Winkworth Fuel and Supply Company, received the citation for his consistent promotion of quality concrete in the Detroit area.

■

Iowa Block Producers Hold Sixth Convention

The Iowa Concrete Masonry Association held its sixth annual convention at Hotel Savery, Des Moines, on March 4.

The one-day meeting was well attended with the morning business session restricted to member plant personnel and covering a wide range of subjects dealing with promotion, technical and other problems. The matter of credits and related subjects were given special attention.

The afternoon session consisted of addresses by Chester C. Woodburn, AIA, Woodburn & O'Neal, Architects, Des Moines; Walter W. Underwood, executive director of NCMA; Waldo J. Marolf, mason contractor of Davenport; and Richard Schmickle, Portland Cement Association, Des Moines.

The meeting closed with a social hour and banquet which featured the presentation of a special scroll award to Elmer W. Dienhart, retired executive secretary of NCMA, granting him an honorary lifetime membership in the Iowa association.

New directors of the association are: R. C. Edelen, Estherville Concrete Products Co., Estherville; Wallace Vance, Ames Concrete Block Co., Ames; Clayton Conte, Marshall Concrete Products Co., Marshalltown; and Glenn C. Tott, Sibley Cement Co., Sibley.

New officers are: John Guild, Iowa-Illinois Concrete Products Co., Bettendorf, president; Merrill Bird, Des Moines Concrete Products Co., West Des Moines, vice president; R. C. Edelen, Estherville Concrete Products Co., Estherville, vice president; and Larry Condrey, Cedar Rapids Block Co., Cedar Rapids, secretary-treasurer.

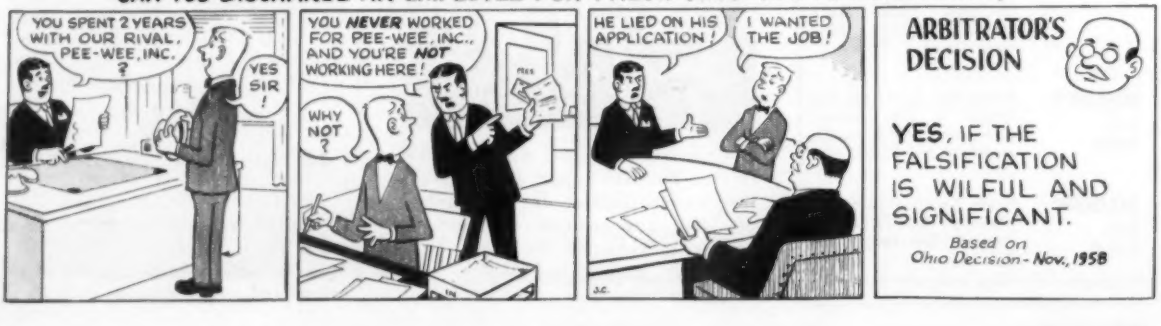
■

Pittsburgh Ready Mix Men Elect New Officers

At the recent annual membership meeting of the Ready Mixed Concrete Association of Metropolitan Pittsburgh the following officers were

IT HAPPENS EVERY DAY — Latest rulings in Labor Relations

CAN YOU DISCHARGE AN EMPLOYEE FOR FALSIFYING HIS APPLICATION?


YOU SPENT 2 YEARS WITH OUR RIVAL, PEE-WEE, INC. ?
YES SIR !
YOU NEVER WORKED FOR PEE-WEE, INC., AND YOU'RE NOT WORKING HERE !
WHY NOT ?
HE LIED ON HIS APPLICATION !
I WANTED THE JOB !
ARBITRATOR'S DECISION
YES, IF THE FALSIFICATION IS WILFUL AND SIGNIFICANT.
Based on Ohio Decision - Nov., 1958

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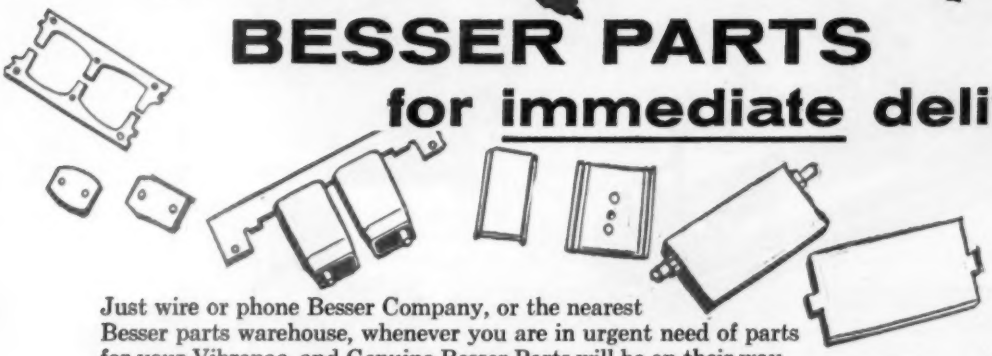

Just wire or phone Besser Company, or the nearest Besser parts warehouse, whenever you are in urgent need of parts for your Vibrapac, and Genuine Besser Parts will be on their way, via plane, truck, train or stationwagon, *immediately*.

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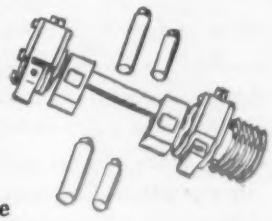

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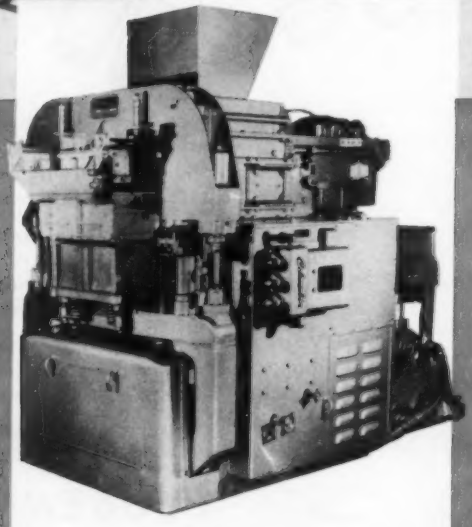
The smooth, trouble-free automatic operation of a Columbia Rack Loader and Unloader brings automation to the concrete block plant—speeds production and reduces man-hours as much as 40% because the entire process can be tended by the cuber—cuts employee fatigue and other personnel problems—and with a minimum of handling you get better block, with fewer culls and very little loss from breakage resulting in . . . MORE PROFIT PER BLOCK.

This high production equipment can be yours on an easy-to-pay basis. Ask your Columbia representative for complete information, or write, wire or phone.



NEW COLUMBIA SUPER MODEL 10

* This machine, combined with the Automatic Rack Loader and Unloader, can increase your production to as high as 8 cycles per minute on 8x8x16 units. It is designed for easier and faster field service and maintenance—can be changed over to half heights in 20 minutes or less. It is completely self-contained and requires only wiring for installation. With or without the Automatic Loader and Unloader the Super Model 10 will give you higher production and assure you of a greater per block profit.

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elected for 1959: E. V. Schaefer, president; James Bryan, vice president; B. K. Davison, treasurer; D. T. McCandless, director; John J. Yute, director; J. C. Moran, secretary; and R. R. Geisler, assistant treasurer.

■

Move To Merge General Portland, Consolidated

General Portland Cement Company and Consolidated Cement Corporation jointly announced recently that the boards of directors of the two companies had approved an agreement of merger, subject to stockholder approval, providing for the merger of Consolidated Cement Corporation into General Portland Cement Company.

Under the terms of the merger agreement each present share of common stock of General Portland Cement Company would be split into two shares after which each present share of common stock of Consolidated Cement Corporation would be converted into 1-1/5 shares of common stock of General Portland Cement Company. The merger is to be submitted to stockholders of General Portland Cement Company at a meeting to be held April 28, 1959, and to the stockholders of Consolidated Cement Corporation at a meeting to be held the following day, April 29, 1959. At the meetings of stockholders, in addition to the election of boards of directors, proposed revisions of the retirement plans of the two companies will also be acted upon.

General Portland Cement Company operates cement manufacturing plants at Tampa and Miami, Florida, Chattanooga, Tennessee, and Fort Worth, Houston and Dallas, Texas. Consolidated Cement Corporation operates plants at Cement City, Michigan, Paulding, Ohio, and Fredonia, Kansas.

■

Jaffray New Plant Supt. At United Concrete Pipe

Ben Jaffray, formerly plant manager of Wendnagel & Co, Chicago, has been appointed plant superintendent of United Concrete Pipe Corporation's main plant at Baldwin Park, Calif., according to an announcement by Lloyd Earl, president.

Wisconsin CPA Elects New Group Of Officers

At its recent annual convention the Wisconsin Concrete Products Association elected new officers and they are shown in the accompanying photograph.

Front row, left to right, Bill Menard, Economy Block Co., Milwaukee, first vice president; Art Hintz, Waukesha Block Co., Waukesha, second vice president; Wesley Peterson, Gillette Concrete Products, Gillette, director; Art Devos, association secretary, Milwaukee.

Back row, left to right, Paul Jensen, Jensen Waylite, Racine, director; Fred Yahr, West Bend Concrete Products, West Bend, promotion chairman; Ray Minette, Berthelet Fuel & Supply, Milwaukee, promotion advisor; Elvin G. Atkinson, Atkinson Block, Waukesha, president; Edwin Bartlett, Best Block Co., Milwaukee, director; Cyril Leslie, Antigo Block, Antigo, director.

Highlights of 55th Annual Meeting of American Concrete Institute Membership In Los Angeles

Phil M. Ferguson, professor of civil engineering, University of Texas, Austin, was elected for a one-year term as president of the American Concrete Institute at the 55th annual convention of the Institute in Los Angeles in late February. He succeeds Douglas McHenry, director of development, Portland Cement Association, Chicago.

Lewis H. Tuthill, concrete engineer, Division of Design and Construction, California Department of Water Resources, Sacramento, was elected to a two-year term as vice president.

Four prominent men in the concrete industry were elected to the ACI Board of Direction for three-year terms. They are: Roger H. Corbetta, president of Corbetta Construction Co., New York, N. Y.; George C. Ernst, professor of civil engineering and director of the Engineering Experiment Station at the University of Nebraska, Lincoln; E. A. Finney, director of the research laboratory, Michigan State Highway Department, Lansing; and Walter J. McCoy, director of research, Lehigh Portland Cement Co., Coplay, Pa.

Three well-known men were elected to honorary membership at this meeting: the late Hardy Cross, professor emeritus of civil engineering, Yale University, best known for his contribution to structural engineering of two methods of analyzing indeterminate structures; H. J. Gilkey, professor and formerly head of the Department of Theoretical and Applied Mechanics, Iowa State College, Ames, who has been eminent in the field of research in engineering materials, particularly concrete; and Eduardo Torroja, professor and director of Instituto-Technico de la Construccion y de Cemento, Madrid, Spain, the eminent author, designer and engineering consultant.

The 1958 ACI awards were as follows: the Turner medal to Douglas E. Parsons, chief, Building Technology Division, National Bureau of Standards, Washington, D. C., "in recognition of notable achievement in the execution and direction of research on concrete and in furtherance of preparation and acceptance of concrete construction standards;" the Kennedy award posthumously to Joseph Di Stasio, Sr., in recognition of his outstanding contributions to the advancement of the objectives of the ACI; the Wason medal for research to F. T. Mavis, dean of engineering, University of Maryland, and M. J. Greaves, development engineer for Arthur G. McKee & Co., Cleveland, for their paper "Destructive Impulse Loading of Reinforced Concrete Beams;" the Wason medal for most meritorious paper to John F. Brotchie, now on leave from the Mel-

bourne, Australia, Commonwealth Department of Works and attending the University of California, Berkeley, as a graduate research engineer with the Institute of Engineering Research, for his paper "General Method for Analysis of Flat Slabs and Plates;" and the ACI construction practice award to Jack E. Rosenlund, chief structural engineer with George L. Dahl Architects & Engineers, Dallas, for his paper "Construction of the Dallas Memorial Auditorium."

Two Standards adopted at the meeting, both of which are being submitted to the membership for ratification by letter ballot, were a recommended practice for mix proportioning for structural lightweight concrete, and a recommended practice for hot weather concreting. The first of these is intended as a supplement to the ACI Standard "Recommended Practice for Selecting Proportions for Concrete" (ACI 613-54) and describes a procedure for proportioning structural grade concrete containing lightweight aggregates. This procedure does not require the use of values for specific gravity or absorption of the aggregates but utilizes a "specific gravity factor." Use of this factor is illustrated and examples are included for proportioning both air-entrained and non-air-entrained mixes.

The hot weather Standard provides information useful in minimizing detrimental effects of hot weather on concrete. Means are described for reducing concrete temperature by proper attention to ingredients; methods of production and delivery; and care in placement, protection and curing. Information is given on the use of admixtures to reduce mixing water requirements and to retard setting. Emphasis is given to the importance of meticulous attention to the use of standard procedures in testing concrete made in hot weather.

A proposed revision in the Standard on measuring, mixing and placing concrete (ACI 614-42) is also being sent to the membership for ratification by letter ballot. This latest report of Committee 614 has been updated to include an outline of practices which have generally been found desirable for first class results in measuring and mixing ingredients for concrete, and when placing it in the work. Although many of these recommendations are applicable and should be used in connection with special types of concrete, it is conventional concrete to which they specifically apply. This proposed revision presents a comparatively high standard of practice rather than common practices; recommendations are therefore made with the thought of permitting the user flexibility in his specifications to the extent he considers worthwhile for his particular project.

■

Death Ends Long Cement Career of Don MacBride

Donald S. MacBride, president of American Cement Corporation, died March 9 in Jefferson Hospital, Philadelphia, after a short illness. He was 65 years old and resided at 1109 Brynlawn Road, Villanova, Pa.

Prior to becoming president of American Cement Corporation, Mr. MacBride was associated with Hercules Cement Corporation for 20 years, successively as vice president for sales; executive vice president and president. On December 31, 1957, Hercules Cement Corporation, Peerless Cement Corporation and Riverside Cement Company merged to form American Cement Corporation and Mr. MacBride was elected president and chief executive officer.

Mr. MacBride had been associated with the cement industry for the past 40 years, starting with the Portland Cement Association as a district engineer. He later served Lone Star Cement Corporation as vice president, Indiana and Pennsylvania divisions, and as manager of its Incor division.

He was a director of the American Cement Corporation and a member of its executive committee. He also served on the boards of The Donner Corporation and Rogers & Baldwin Hardware Co. He was a former director of the Portland Cement Association and American Mining Congress. He was also a member of the American Society for Testing Materials, American Concrete Institute, The Union League of Philadelphia, Merion Cricket Club, Haverford, Pa., California Club of Los Angeles and the American Legion.

Mr. MacBride graduated from the University of Pennsylvania, class of 1916, with a B.S. in civil engineering. He was a member of the Bryn Mawr Presbyterian Church, Bryn Mawr, Pa. During World War I he served as Captain in the U.S. Army Engineers.

Surviving are his widow, Mabel B.; daughter; Mrs. Leonard A. Borkland of Dallas, Texas; a son John B. of Englewood, New Jersey; a sister Elizabeth M. Anderson; a brother Robert B. of Modesto, California, and seven grandchildren.

T. E. Long New Eastern Regional PCA Manager

The appointment of Thomas E. Long as eastern regional manager of the Portland Cement Association has been announced by James D. Piper, Vice President for Promotion. In his new position, Mr. Long will supervise the association's field activities in eleven eastern states from the regional office in New York City.

Mr. Long succeeds Miley J. McMillan, who has been named to the new position of senior consultant in the promotion division. Mr. McMillan will remain in New York during the initial phase of his new assignment.

Mr. Long joined the association in 1947 and has served successively as assistant manager and manager of the Farm Bureau and assistant to the vice president for promotion. Before joining the association, he was with the Commercial Research Division of Republic Steel Corp., and on the staff of the North Dakota State College.

An agricultural engineering graduate of the University of Nebraska, Mr. Long is a registered professional engineer in Illinois and a member of the American Concrete Institute.

In his new capacity, Mr. McMillan will serve as a senior consultant on matters of engineering and technical promotion. He joined the association in 1929 and has been eastern regional manager since 1945. Mr. McMillan is a civil engineering graduate of Iowa State College, a registered professional engineer in New Jersey, and a member of many technical and engineering societies. He is currently on the board of governors of the Concrete Industry Board of New York City and the New York Good Roads Association.

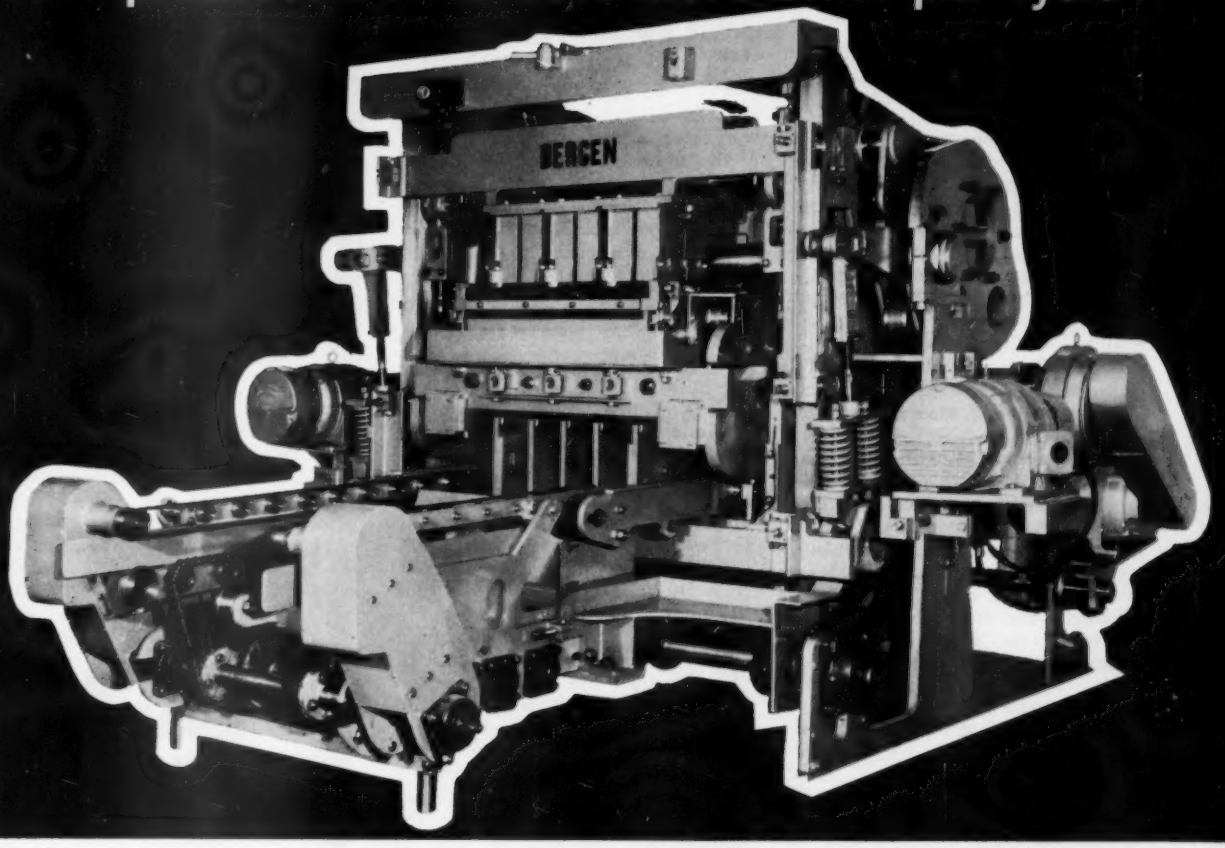
■

Southern Materials To Buy Ingram Concrete

Southern Materials Co., Inc., Norfolk, Va., has announced an arrangement to purchase all the physical assets and leases of Ingram Concrete Co., trading as Jacksonville Concrete Co., which owns and operates seven ready mixed concrete plants in Jacksonville, St. Augustine and MacClenny, Florida, and a concrete block manufacturing plant in Jacksonville. The assets to be acquired consist principally of plant machinery and equipment, trucks, mixers, automobiles and inventories of raw materials.

The new BERGEN "THIRTY-SIX"

produces 33⅓ to 50% more block per cycle



This completely new block machine has been the talk of the Industry since it was introduced at the Concrete Industries Exposition in Cleveland, Ohio, in January. It makes 33⅓ to 50% more units per cycle. It makes units up to 36" long, and all heights up to 12" high.

The BERGEN "THIRTY-SIX" is designed to meet *Tomorrow's* needs *Today*—it will give you more production at less cost—it will help you share, profitably, in the tremendous growth predicted for the Concrete Block Business. Write today for information on the BERGEN "THIRTY-SIX".

NUMBER OF BLOCK PER PALLET 3/8" x 18-1/2" x 38"		INCREASE OVER 18-1/2" x 26" PALLET
SIZE	QUANTITY	
Brick	48	50%
1-5/8" wide	16	33-1/3%
2-5/8" wide	12	33-1/3%
3-5/8" wide	9	50%
5-5/8" wide	6	50%
7-5/8" wide	4	33-1/3%
11-5/8" wide	3	50%

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Bergen manufactures a complete line of Block Plant Equipment—Batch Mixers, Skip Hoists, Off-bearing Hoists, Height and Density Control Panels, Mold Repair Tables, and a full line of mold attachments and replacement parts.

News Announcements from Companies Servicing the Concrete Industries

MANUFACTURERS' NOTES

T. L. Smith Company, Milwaukee, Wis., has elected William A. Clayton to its board of directors. Mr. Clayton, with over twenty years experience in the construction equipment field, originally joined Smith as eastern district sales manager, then became vice president and director of sales nationally. A graduate of the University of Illinois, Mr. Clayton is also a past director of the Associated Equipment Distributors of America. Leonard E. Broberg has also been appointed vice president in charge of engineering. Prior to joining Smith in 1956, Mr. Broberg was chief engineer for the agricultural equipment division of a large Milwaukee manufacturing company. He is a graduate of the University of Wisconsin and during his engineering career has specialized in machinery and product design.

■

Leschen Wire Rope Division, H. K. Porter Co., Inc., St. Louis, Mo., has named Gordon N. Dow as general manager, and R. Rex Hartup as general sales manager. Jack T. Dilke has been appointed sales representative for the division to cover the territory of central and western California, Nevada, Utah and southeastern Idaho. Mr. Dow joined Leschen in 1952 as a sales representative in the Michigan area. Later he was made sales manager of the Chicago district, then general sales manager of the division. Prior to coming to Leschen, Mr. Hartup was with the Florida Division of Food Machinery & Chemical Corp., where he helped greatly to establish the prestressed concrete industry in the United States. He joined Leschen in January 1958 as prestress planning engineer and was later named district manager of the southeast district. Mr. Dilke comes to Leschen from John A. Roebling's Sons Corp. where he was a sales representative in the wire rope division for sixteen years and the electric wire and cable division for seven years.

■

Challenge Mfg. Co., Los Angeles, Calif., is constructing a new plant to be located on a 12-acre site just off the Santa Ana Freeway in La Mirada. The new plant, expected to be in operation by next June, will be a single structure with more than 210,000 square feet under roof including a modern two-story office building with over 4,000 square feet of floor space. The new plant will also have the added advantage of 1,600 feet of railroad siding and a parking area for 500 cars. Under the new expansion program, in addition to its line of truck mixers, Challenge will manufacture other high production equipment for the construction industry as well as equipment for use in the commercial laundry field and in the marine industry.

■

Tamms Industries Co., Chicago, Ill., announces the appointment of Raymond D. Huff as direct factory representative for the entire state of Indiana. He will sell Tamm's complete paint lines as well as the pre-measured packaged goods line of plaster, cement and mortar colors, dust on colored concrete and dry colors. Mr. Huff will headquarter at 4411 Thornleigh Drive, Indianapolis, Ind.

W. A. CLAYTON

G. N. DOW

J. L. JARBOE

Chain Belt Company, Milwaukee, Wis., has recently appointed Joseph L. Jarboe as district manager of its Rocky Mountain territory which includes the states of Utah, New Mexico, Colorado, Montana and Arizona.

■

Carter-Waters Corp., Kansas City, Mo., at the recent annual meeting of its board of directors elected Albert R. Waters to the newly created office of executive chairman of the board. Walter E. Beanway was elected to the office of president to succeed Mr. Waters in that position. Other officers re-elected were: Richard L. Coleman, vice president; Robin E. Walker, vice president; Paul J. Kirner, treasurer; John E. Bethel, secretary.

■

Blaw-Knox Company, Pittsburgh, Pa., has named Robert H. Meyer as construction equipment sales engineer. Assigned to the Chicago regional office, Mr. Meyer's area will include North and South Dakota, Minnesota, Nebraska, Wyoming, Colorado and eastern Montana.

■

Champion Manufacturing Co., St. Louis, Mo., is moving from its present quarters at 2028 Washington Ave., to occupy much larger quarters at 3700 Forest Park Blvd. The new facilities, totaling 30,000 square feet, were acquired as part of Champion's overall expansion program. Champion has been in business in St. Louis since 1946.

■

American Steel & Wire Div., United States Steel Corp., Cleveland, Ohio, has named Edward A. Murray vice president for sales. He succeeds Harry M. Francis who has been elevated to executive vice president of the division. Mr. Murray has been with American Steel & Wire since 1934, when he started as a sales correspondent in the Chicago office.

Joseph T. Ryerson & Son, Inc., Chicago, Ill., announces the following management changes: Melvin B. Monson, general manager of the Milwaukee plant, will be general manager of the company's plant at Los Angeles, succeeding Wayne D. Dukette, deceased; Charles S. Hegel will become the new general manager at Milwaukee and will be succeeded in his former post as national product manager for stainless steel by H. Daniel Robb. Edward J. Richardson in addition to his duties as national product manager for tubing and cold finished bars will assume Mr. Robb's former responsibility for alloy steel.

■

White Truck Division, White Motor Co., Cleveland, Ohio, has promoted Charles W. Moss to service sales manager, succeeding Harold Haldeman who has entered White's management sales training course. Mr. Moss has been with White since 1946.

■

Motorola Communications & Electronics, Inc., Chicago, Ill., has named Robert F. Davis as manager, two-way radio sales, of a 13-state midwest area. Eric Goleas succeeds Mr. Davis as regional manager in northern Illinois, northeastern Indiana, eastern Wisconsin and the upper peninsula of Michigan. Both men will headquarter at 4900 W. Flournoy Ave., Chicago, Ill.

■

Stephens-Adamson Mfg. Co., Aurora, Ill., has elected two members to its board of directors, Roger W. Barton, export manager, and Ernest T. Rollins, treasurer. Mr. Barton has been with the company since 1948 and Mr. Rollins since 1926.

■

Allis-Chalmers Mfg. Co., Milwaukee, Wis., has appointed Bruce C. Halsted manager of the Richmond district of Allis-Chalmers Industries Group, succeeding J. M. Mathews, resigned. Newly named as representatives to sales office in the Industries Group are Lawrence R. Laffey, Chicago district, and Clyde A. Taylor and James R. Hodgson to the St. Louis district, Wayne R. Broaddus, Jr., Atlanta district, and Joseph W. Hagan, Birmingham district.

■

Signode Steel Strapping Co., Chicago, Ill., has named three men to the office of assistant vice president: Joseph F. Beckman; M. C. Carlson; and Hobart P. Young. Mr. Beckman will be manager of the steel industry sales division, Mr. Carlson will be manager of the general sales division, and Mr. Young will be manager of the Glenview tools and seals division. The latter unit is undergoing a major expansion program.

■

Carolina Solite Corp., subsidiary of Southern Lightweight Aggregate Corp., Richmond, Va., has named A. Cabell Ford, Jr., as sales representative for its new office in Raleigh, N. C. Mr. Ford is a native of Richmond, attended Hampden-Sydney College, and served four years with U. S. Gypsum Co.

■

Noble Company, Oakland, Calif., announces the appointment of Van Barber as southwest regional sales manager of the batching plant division in Los Angeles and Larry Taylor as sales executive in the automation division with headquarters in Oakland.

■

Alpha Portland Cement Co., Easton, Pa., has named James H. Gourd as eastern district sales manager. He has been a salesman for Alpha in the northern New Jersey territory since 1956.

■

Johnson-March Corporation, Philadelphia, Pa., has moved its offices in that city to 3018 Market St.

"POZZOLITH and Master Builders field man help us simplify quality control"

LUDWIG F. KAHLE... President, Pine Hill Concrete Mix Corp., Buffalo, New York.

BILL BECKER, Pine Hill's General Manager, depends on his Concrete Technician, Marty Wackosky, and Master Builders field man, Bill Brown, for maintaining concrete quality.

"In our six plants, we maintain constant quality control to provide our customers with concrete of good placeability, easier finishing and maximum durability. POZZOLITH helps us get that kind of concrete. It reduces water—and gives us easy control over air-entrainment and setting time.

"Our first experience with POZZOLITH was several years ago when we had a problem with controlling air content. The Master Builders field man worked with us on a series of tests which proved we could easily maintain air content within the range of job requirements—and without loss of strength. We found that POZZOLITH has other important benefits—all of them adding up to higher quality concrete. And the Master Builders field man—we now consider him practically a member of our staff."

Over 1500 *quality conscious* producers of Ready-Mixed concrete and concrete products are using today's POZZOLITH for similar reasons. They've found there's no equal to POZZOLITH . . . and to Master Builders field service. You and your customers can profit immediately. Call in the local field man now.

The Master Builders Company, Cleveland 3, Ohio
Division of American-Marietta Company
The Master Builders Company, Ltd., Toronto 9, Ont.
International Sales Department, New York 17, N.Y.
Branch Offices in all principal cities.

PINE HILL concrete meets high quality requirements for such outstanding structures as Buffalo's new Tishman Building.

MASTER BUILDERS® POZZOLITH*

**POZZOLITH is a registered trademark of The Master Builders Co. for its concrete admixture that helps produce better quality ready-mix concrete more economically.*

THE EDITOR'S PAGE

DOUGLAS LEE

Profits In The Ready Mixed Business

The old subject of price wars has been kicked and booted around a vast number of times over the years; editors, business writers, and speech-making businessmen have all had their say. So, instead of adding directly to the overabundant wealth of material on this subject, we took a look at some of the facts and figures presented at the recent National Ready Mixed Concrete Association convention and compared these with some of the statistics revealed in the last two ready mixed production surveys.

A number of the convention speakers pushed the point that the costs of labor, equipment, and materials have been rising steadily over the years; labor's increase last year averaged out to approximately 6 per cent, and this year it's expected to go up another 5½ per cent. Equipment costs last year went up in the neighborhood of 7½ per cent, with further increases expected this year. Price of portland cement increased 1 per cent last year, according to the government; and sand, gravel, and crushed stone went up 2 per cent.

Next, according to the tabulated results of the first 219 answers to the Ready Mixed Association's recent "Operating Cost Ratios" survey, the average profit, before taxes, was 5 per cent of net sales. Using the average production figure from the 1957 annual ready mixed production survey, this 5 per cent profit on 54,560 cu. yds. comes to $37,646, of which the government would take a slice amounting to $14,076. If the median production figure of 28,436 cu. yds. were used, the profit, before taxes would be only $19,611, of which the government would want $5,883. What remains—for reinvestment in the business, dividends, state taxes, etc.—is not even enough to buy a new ready mixed truck and equipment.

But not all ready mixed companies replying to the "Operating Cost Ratios" questionnaire were making this 5 per cent average figure; some were making less to bring the average down. At the convention, the listing of the regions where the profit picture was not good and where some red ink notations showed up included: New England, South Atlantic States, East North Central, and the Pacific Coast.

To get a clearer notion of why the profit picture in these areas was below average, we went back to the two most recent tabulations of the ready mixed production survey and developed the following data:

State	No. of Companies		Production (cu. yds.)		Average Value per-cu. yd.		Value $	
	1956	1957	1956	1957	1956	1957	1956	1957
Mass.	25	23	2,337,187	1,605,512	$12.89	$12.32	$ 30,118,577	$ 19,771,112
Ga.	19	22	519,169	467,418	14.01	13.73	7,273,816	6,419,550
Mich.	43	47	3,687,760	2,839,242	15.37	13.72	56,683,474	38,948,081
Minn.	23	27	880,608	961,212	14.56	14.49	12,820,273	13,924,241
Calif.	84	96	10,470,197	9,910,014	11.56	11.63	121,082,996	115,278,045

Admittedly, we were selective in the states chosen, though there's at least one state from each of the below-average regions, profitwise. Also, a strict comparison leading to specific conclusions is unjust, since the exact same companies did not report in each survey; the reported results cover only a portion of the producers; and the surveys cover 1956 and 1957 instead of 1957 and 1958.

But still some probable conclusions can be drawn: (1) general construction in these states diminished during this period, with the result that demand lessened for ready mixed concrete; (2) though the outlet for ready mixed decreased, the number of companies going after the business increased slightly; (3) Somewhere along the line, someone became jittery and cut the price (unrealistically, we expect; though it's possible, but improbable, that the price was too high in the first place); (4) Increased costs of labor, equipment, and materials were not viewed in the proper perspective and, as a result, were not passed on to the customer; and (5) most of the companies could have made a better showing profitwise if they had at least remained firm at the previous year's price.

George R. Bathe conclusively proved that a ready mixed producer can deliver concrete profitably and competively to nearby highway paving projects; Mr. Bathe's firm, Ready Mixed Concrete Co., Omaha, Neb., has delivered, per hourly contract schedule, between 70 and 125 cu. yds. of 2-in.-maximum-slump concrete to three separate stretches of highway construction. To get such projects, the ready mixed producer must determine what the contractor's concrete needs will be, make certain before hand that you can profitably deliver the concrete when and where it will be needed, convince the contractor you can do so with less trouble and expense to him, then go out and meet or exceed the contract schedule. *Mr. Bathe's complete speech begins page* 23.

S. H. Westby, PCA, reviewed results of a recent motivation study of ready mixed concrete customers. Complaint categories, in the order of their importance, were (1) undependable deliveries, (2) price, (3) quality, and (4) quantity. A ready mixed customer and producer relationship is a long-term affair. A contractor, on the average, will buy from a producer over a 10-year period; but during this same time span he'll also be buying concrete from two other producers for a variety of reasons—location, price, service, and an assured steady supply. Most medium-sized jobs use ready mixed; the large and small construction projects, where job mixing is still the practice, are the areas needing attention—highways, airport runways, farm construction.

RM in Highways, Overexpansion

Quite a number of ready mixed, sand and gravel producers, suppliers, and their wives wanted to partake of the New Orleans convention activities—sessions, daytime strolls along 18th-century Royal St., nighttime tours of Bourbon St. with its hawkers and music, and the boat ride along the New Orleans water front (chilly as it was). Attendance figures at the 29th annual convention of the National Ready Mixed Concrete Association and 43rd annual convention of the National Sand and Gravel Association probably came pretty close to 2,000 including wives.

The new NRMCA president is F. E. Schouweiler, president, Old Fort Supply Co., Ft. Wayne, Ind. He took over the gavel from M. Eugene Sundt, vice president, Albuquerque Gravel Products Co., Albuquerque, N.M. The other incoming officers are: 1st vice president, John B. Donovan, Valentine Concrete Co., Inc., Springfield, Mass.; 2nd vice president, Ralph H. Anderson, Anderson Concrete Corp., Columbus, Ohio; and treasurer, William J. Hicklin Jr., Capitol Concrete Co., Jacksonville, Fla.

Members of the NRMCA executive committee for the coming year are: Walter M. Keeler, Elbert F. Lewis, Edward J. Nunan, and H. Irving Rhine.

New members of the NRMCA board of directors are: George P. Duecy, Gary L. Marable, Bert W. Milling, Robert L. Muller, James A. Murphy, Edward J. Nunan, Hans Rexach, John J. Ryan, Eric C. Ryberg, Robert C. Shiely, and Roger Slugg.

Interesting information came out in a number of the talks and panel discussions of the week-long convention at New Orleans; of more than usual interest were some of the conclusions developed from two of the engineering programs conducted by the association's research staff at Washington and the University of Maryland.

Further testing the possible conclusion presented at last year's convention that maximum strength, compression and flexure, did not increase as the maximum particle size increased beyond the ¾ to 1½-in. range, Delmar L. Bloem, associate director of engineer, reported that results of test findings.

Strength tests were conducted on concretes with maximum particle sizes of ⅜, ¾, 1½, and 2½ in. One group of coarse aggregates were smooth, rounded particles, and another were angular. Other factors, varied under control to give tests more scope, were: cements (air-entraining and non-air-entraining), slumps, sand quantities, and sizes of test cylinders and beams.

In the discussion of the test results, Mr. Bloem stated, "In spite of the progressively decreasing water-cement ratio which accompanied

M. Eugene Sundt, NRMCA president, posed the problem of over expansion of ready mixed plant facilities. Existing plants, Mr. Sundt estimates, are working at only 23 per cent of capacity; truck fleets at only 60 per cent of rated capacity. Price wars and quality concrete don't go together; a way to minimize price cutting for jobs would be to encourage tougher inspection of concrete going into the residential market. An individual's right to accept or reject a union should remain inviolate. Labor deserves a share of the production value; but with the slim profit margins of ready mixed producers, wage increases can only come if production per employee increases or the price of the end product can be increased.

Roger H. Slugg, speaking of good truck drivers and public relations, reviewed the Ohio Ready Mixed Assn.'s recent driver training course. Hire good drivers—men who are above average in intelligence, courteous, know and take care of equipment, drive defensively, and respect the law and authority. Such drivers, on the average, have respect for your company and its objectives, take care of company equipment, handle your vehicles in such a manner as to make a good impression on the public and on the construction crews and the job sites. People know of your company by its trucks roaming the streets, and your truck drivers, to a large extent, determine whether this public impression is favorable or unfavorable.

Key Talks at RM Convention

the increases in maximum aggregate size, both compressive and flexural strengths reached a maximum at about ¾ inch, and either remained unchanged or decreased thereafter. The effect was more pronounced for compression than flexure, the compressive strength being about 20 per cent lower for 2½-in. maximum size than for ¾-in.

"It appears that, from the standpoint of strength, no advantage is derived by specifying or using the very large sizes of aggregate. Equal or better strengths can be secured with moderate maximum sizes, which, in many cases, are available more economically."

Richard D. Gaynor, associate research engineer, reported results of exploratory tests on effect of retarders on water requirements, air content, strength, and setting time of concrete. Four water-reducing retarders to aid the placement of concrete in hot weather were used; all were claimed by the manufacturers as non air entraining, though two of them proved to entrain moderately high amounts.

Mr. Gaynor's report stated, "Each admixture was added at three different rates, representing that recommended by the manufacture, and 2 and 4 times that amount." Then strength tests were compared the results of the control specimens at 1 (when possible), 3, 7, 28, and 91 days. Specimens with 4 times the recommended usage had not hardened in one day; so the earliest strength tests had to be postponed.

As claimed by the manufacturers, all of the retarders reduced mixing water requirements. The report further stated, "For both the recommended and double rates of application of all the admixtures, the one-day strengths were about equal to that of normal concrete. At all later ages, these rates produced increases in strength . . . for the recommended usage, averaging 112 per cent of the normal concrete at ages from 7 to 91 days . . . and for 2 times the recommended usage, averaging 121 per cent at ages from 7 to 91 days.

"Concrete with 4 times the recommended amounts of the two non-air-entraining admixture reached strength equal to normal concrete between 3 and 7 days. At 91 days they both produced strengths about 130 per cent of that of normal concrete.

Concrete with 4 times the recommended amounts of the two air-entraining admixtures, which contained about 15 per cent of air and about .4 sack less cement per cubic yard, developed strength at 91 days about 80 to 90 per cent of normal concrete.

"Rate of hardening tests of mortar (incorporating 1, 2, and 4 times the manufacturers' recommendations for usages of retarders) suggested that potentially useful postponements of setting may be secured with these re-

● Six of the 11 new board members pose together: from left, John J. Ryan, Robert C. Shiely, Roger H. Slugg, Edward J. Nunan, Eric C. Ryberg, and Bert W. Milling.

● M. Eugene Sundt, left, relinquished direction of the association to the new officers: John B. Donovan, F. E. Schouweiler, Ralph H. Anderson, and Wm. J. Hicklin, Jr.

tarders used at either the recommended or 2-times recommended rates.

Use of 4 times the recommended amounts of these admixtures produced long delays in hardening, accompanied in some cases by erratic setting characteristics and reductions in strength."

Business—past, present, and future

To gain realistic information for his report on "What Does the Market Hold for Ready Mixed Concrete in 1959," William Moore, president, J. P. O'Connell Co., Boston, developed a questionnaire that was sent out to a representative group of producers in the industry.

Questions in the first part of the survey were built to determine the character of the ready mixed market over the last couple of years and to obtain thinking of producers as to what's in store during 1959. Mr. Moore's tally of answers was broken down into sections of the country:

NEW ENGLAND: overall, the picture of the ready mixed producers' volume seems to be steady to good, with some increases expected in 1959. But the profit picture wasn't too satisfactory, though this is expected to change in 1959. Fewer new ready mixed businesses are coming into the area, but established companies are expanding.

MIDDLE ATLANTIC STATES: producers, here, were looking for slightly better year in 1959 than 1958. New ready mixed producers are coming into this area; and more are expected next year. Those plants now in business are operating at a small profit margin.

SOUTH ATLANTIC: in this area, 1958's ready mixed volume was about equal to 1957. Slight increases are hoped for in 1959. As to new companies and expansion of present companies, the trend was upwards in 1957 and 58, and this growth is expected to continue in 1959. Profit margins in this area are narrowing. Also, there's some indication, according to the report, that plant facilities in this area are already badly overbuilt.

SOUTH CENTRAL: plants in this region replied that volume in 1958 was up over 1957, and slight increases are expected in 1959. Respondents also said they were working with fairly good profit margins, though this was expected to decline in the future.

EAST NORTH CENTRAL: volume, particularly in Michigan, was down, and there was little improvement expected during the next year. Also, those who replied stated that business in the immediate past was accompanied by little or no profit; immediate future prospects aren't too much brighter. Fortunately, this slowed-down picture has reduced capital investment in new plants and excessive expansion.

WEST NORTH CENTRAL: business volume has been good, is good, and is expected to be better. And this has been accompanied by fair profit margins. This bright picture for the area has attracted new companies to be formed, and older companies are expanding. But respondents expected this growth rate to decline.

MOUNTAIN: not enough returns from this area were received to gain any realistic picture, but those replying said volume in 1958 was down slightly, though this was expected to change in 1959. Even with the slightly reduced business volume, profit margins have been decent, according to those who replied. During the past few years there's been a steady increase in new plants.

PACIFIC: 1958's volume was about the same or slightly lower than the previous year, but producers were optimistic about 1959. The profit picture, in this area, was mixed; competition is considerable. Even so, new companies are moving in, and established companies are expanding.

In answer to another question asked on the survey: of 34 producers replying, 18 said they were planning to build new plants in 1959; 26 said they were going to expand or rehabilitate existing plants; and 29 were planning purchases of trucks and truck mixers.

Four internal problem areas, with a write-in space for others, were suggested to producers, and they were asked to signify which were most important. The answers rated as the number one problem "uneconomic expansion of facilities," followed closely by "steadily increasing labor costs which cannot be passed along to customers because of competitive forces," and "lack of knowledge among producers on elements of costs and consequent inability to control costs."

Uneconomic Plant Expansion

Adding weight to and, to an extent, verifying the misgivings of producers about overexpansion of plant producing facilities are some of the facts revealed in M. Eugene Sundt's study and comparison of past annual production surveys of the Ready Mixed Association. As shown by the figures over the years, the average company's size has decreased slightly, as has the average plant's annual production.

● Speakers at the local association meeting were: from left, John W. Winkworth, Joe E. Offutt, H. G. Feraud, Thomas E. Durkin, Paul Lenchuk, and Claude L. Clark.

● Among the considerable crowd that showed up bright and early for the Ohio association breakfast were: Roger Slugg, M. Eugene Sundt, S. H. Westby, and E. E. Osborn.

Further, according to Mr. Sundt, "In the 1957 survey, 1167 companies reported 63.7 million cu. yds. of production, requiring 2191 plants and 19,877 delivery units. If we assume the average plant to have a capacity of 75 cu. yds. per hour, 8 hours per day and 210 working days per year, these companies had a capacity of 276 million cu. yds. but operated at 23 per cent of capacity. Using an average rated capacity of 5.1 cu. yds. per delivery unit, these companies had a gross fleet capacity of 101,400 cu. yds. per trip. In any fleet 10 per cent will always be out of service for repairs and maintenance, so the usable fleet capacity was 91,200 cu. yds. per trip. If we assume 5 trips per day and 210 working days per year, this fleet could have delivered 96 million cu. yds. of concrete, so the fleet worked at 66 per cent of net capacity, or 60 per cent of rated capacity. This indicated that a mixer truck averages 3.6 trips per day." Earlier Mr. Sundt had compared the average yield per truck per month from 1951 to 1957; it declined from 319 cu. yds. to 268 cu. yds., despite the increased size of hauling units.

Increasing Labor Costs

A number of speakers commented directly on labor's continuing demands for increased wages and side benefits; others skirted the subject with talks about improving employee relations, always mindful that such steps help develop a company spirit to the end that labor is less restless.

Answers to a question in Mr. Moore's limited survey developed a figure for labor's increased costs in the industry last year which amounted to close to 6 per cent. Expected increase for 1959 will be in the neighborhood of 5½ per cent.

Vincent Ahearn's estimate for the 1958 increase in labor cost comes to around 15 cents per hour, including fringe benefits of package deals: more paid holidays, more liberal vacation allowances, shift differentials, guaranteed workweeks, pension and welfare programs.

Mr. Sundt had some warnings about this subject, "Increasing labor costs are always a troublesome worry. Labor always has been, and always will be, entitled to a certain share of your production value; a share of your net income from sales, less the value of materials and supplies you purchase, such as cement and aggregates. If you allow labor's share to increase when conditions prohibit increasing your price you are heading for the poorhouse."

Improving employee relations through the use of a company house organ was discussed by Robert F. Porter, vice president, Harry T. Campbell Sons' Corp. Called the "Campbell Employee News," the 12-page newspaper-magazine now, a year and one-half after the first issue, has a printing run of 1,600 every other month. Mostly newsy and about employees, the paper also serves to explain company policy and give the employees a clearer picture of the wide-spread operations and diversified products of the Maryland firm.

Mr. Porter was enthusiastic about the house organ's results: employee interest and acceptance, compliments from suppliers, customers and local business men, increased employee loyalty and morale, and employees who contribute more to the company.

Cost of the "Campbell Employee News," which is printed offset and prepared with the aid of a local advertising agency, comes to 67 cents per copy. This includes typesetting, printing, gathering, inserting in envelopes, taxes, first class postage, and the agency's fee.

Employee credit unions, and in particular the credit union in operation at Jahncke Service, Inc., were explained by Herbert G. Jahncke,

● Mrs. Nan T. Cavey, Washington staff, smiles; she's flanked by past and present RM association officers, board members, and officers of the exhibit division.

vice president of the New Orleans ready mixed firm.

The company credit union, now in operation for four years, has 325 members and assets in excess of $65,000. Loans to employee-members last year totaled approximately $100,000. And for those who have put savings in the union, it has always paid 3 per cent or more per year, according to Mr. Jahncke. Payroll deductions are permitted for both savings and the repayment of loans; monthly deductions now average approximately $10,000.

Mr. Jahncke listed the benefits to his company from having a credit union as, "reduction in garnishment of employees' wage assignments, company loans or pay advances, and the whole time-wasting process of complying with credit checks on employees. Furthermore, . . . the credit union has reduced absenteeism, turnover, lost time, and even accidents resulting from money worries."

Knowledge of Costs

A number of aids to help the ready mixed owner or executive overcome the third internal problem area, "lack of knowledge among producers on elements of costs and consequent inability to control costs," have been developed by the NRMCA; these would include the "Cost Accounting Manual for the Ready Mixed Concrete Industry" and the yearly ready mixed production surveys.

To those attending this year's convention, Kenneth E. Tobin, Jr., NRMCA associate executive secretary, reported on still another of the Association's efforts to help producers recognize, compare, and evaluate costs.

K. TOBIN, JR.

In his "Progress Report on Study of Operating Cost Ratios in the Ready Mixed Concrete Industry," Mr. Tobin reviewed some of the preliminary information developed from the first 219 completed questionnaires: (the questionnaires were sent out last November).

On a nationwide basis (Mr. Tobin said that returns represented all areas of the country and sizes of producing plants), the average net selling price per cu. yd. of concrete was $13.93. Of this, the various costs, both in dollars and cents and as a percentage of net sales were as follows:

"1. Material Costs—$8.22 per cu. yd. or 59 per cent of net sales (this includes only the costs of cement, aggregates, additives, and the cost of transportation thereon)

"2. Plant Operating Costs—$.84 per cu. yd. or 6 per cent of net sales (this includes all costs before depreciation, except material costs, to the point of charging the batch or mix into the truck)

"3. Delivery Costs—$2.23 per cu. yd. or 16 per cent of net sales (this includes all costs before depreciation from the point of charging the batch or mix into the truck to delivery at the job site)

"4. Depreciation—$.84 per cu. yd. or 6 per cent of net sales (this includes depreciation on company owned equipment for transporting raw materials, company owned equipment for delivering concrete, and plant equipment)

"5. Other Costs—$1.11 per cu. yd. or 8 per cent of net sales (this includes office, sales, promotional and executive expense, but excluding state and federal income taxes)

"6. Total Costs—$13.24 per cu. yd. or 95 per cent of net sales (this includes all costs before state and federal income taxes)"

Thus, according to Mr. Tobin's review of the preliminary tabulation, "the return for the average ready mixed concrete company in the U.S. before taxes is currently $.69 per cu. yd. or 5 per cent of net sales.

"On a regional basis, using the eight regions established by the United States Bureau of the Census, . . . material costs ranged from 57 per cent of net sales in the Middle Atlantic States to 61 per cent in New England, the South Central States, and the Pacific Coast. Plant operating costs ranged from 4 per cent in the Mountain States to 8 per cent in the South Central States. Delivery Costs ranged from 14 per cent in the West North Central and South Central States to 19 per cent on the Pacific Coast. Depreciation costs ranged from 5 per cent on the Pacific Coast to 8 per cent in the South Atlantic States. Other costs ranged from 7 per cent in the Middle Atlantic and South Central States to 10 per cent in the East North Central States.

Trophies,

● Safety trophy recipients: Class A —W. C. Snow, Southern Materials Company, Inc.; Class B—W. S. Walters, Fischer Lime & Cement Co.; Class C—P. M. Silva, Morse Sand & Gravel Co., Inc.; Class D—R. E. Porter for Thomas, Bennett & Hunter, Inc.; Class E—H. E. Davis, Bama Concrete Products.

"The survey produced some interesting corollary information. For example, the average number of truck mixers or agitators operated per company is 26, and the average output per hour of these mixers or agitators is 3.15 cubic yards. The average production per mixer or agitator is 3,561 cubic yards annually. In terms of net sales, the average mixer or agitator yields $48,800 annually. Expressed in another way, the survey reveals that the average annual net sales per cubic yard of rated capacity per mixer or agitator was $8,842 annually.

"An interesting, and perhaps surprising, fact developed thus far by our survey is that the highest annual net sales per mixer are obtained in the New England States, where the current average is $55,832 per mixer per year.

"The New England area likewise shows the highest annual production per mixer with an average of 3,952 cubic yards. The perhaps surprising aspect in these data stems from the fact that the New England area obviously has a shorter operating season because of climatic conditions than many other sections of the country. Undoubtedly, the basic explanation of this high average yield per mixer results from the average production of more than four cubic yards per hour per mixer or agitator.

"The average production per hour

Plaques, Honorary Memberships, and Keys

● 2nd NRMCA president, Harry F. Thomson, 1933-35, is given honorary association membership.

● Wisconsin Ready Mixed Association's past president, John Findorff, presents a plaque to Vince Ahearn.

● M. Eugene Sundt gets a key to New Orleans from Mayor deLesseps S. Morrison.

● Honorary RM membership goes to Alexander Foster, president, 1945.

per mixer or agitator for the remainder of the country ranges from 2.7 cubic yards in the South Atlantic States to 3.6 cubic yards in the South Central States. The 219 reporting companies, operating an average of 26 mixers or agitators per company, reported an average capacity for those 26 mixers or agitators of 146 cubic yards. In other words, the size of the average mixer or agitator, in terms of rated capacity, is 5½ cubic yards. This means that the average annual production per cubic yard of rated capacity of these mixers or agitators is 644 cubic yards, or $8,842 per year in terms of net sales.

"The survey also develops data on the average annual depreciation per mixer or agitator. For the 219 reporting companies, the average annual depreciation per mixer or agitator was $1,942. On a regional basis, this average annual depreciation ranged from $1,602 per mixer or agitator on the Pacific Coast to $2,319 per mixer or agitator in the South Atlantic States."

Mr. Tobin made it clear that his report was of a preliminary nature, based upon returns of the first 219 questionnaires. And the limited information presented was mostly on a national or regional basis. Careful analysis of the final tabulation by region or state, if it becomes possible to break the figures down that far without revealing individual plant statistics, will be necessary to develop the maximum usefulness to the individual company.

Public and Customer Relations

A number of the talks centered around areas of the ready mixed business that influence public and customer impressions: Elbert F. Lewis's talk on working with the concrete contractor, George R. Bathe's discussion of his company safety program, Roger Slugg's review of the Ohio Ready Mixed Association's driver training course, and S. H. Westby's examination of a PCA sponsored market study of the opinions of users of ready mixed concrete.

Mr. Lewis, president of F. D. Lewis & Son, Inc., told of the formation, last year, of The National Concrete Contractors Association and expressed the hope that a close work-

ing relationship would be developed between the NRMCA and this new organization.

But further, Mr. Lewis suggested that each ready mixed producer should make every effort to bridge the gap between his own organization and the local concrete contractors'—particularly the smaller ones that now have less concentration. It's these small contractors, Mr. Lewis mentioned, who sometimes sprout into large, volume users of concrete.

Mr. Lewis suggested some of the ways to bridge this gap:

"1. Create a better atmosphere in settling disputes when failures exist; develop a co-operative attitude—one of listening to questions brought out by the contractors and their finishers.

"2. A frequent complaint voiced by small contractors is unco-operative and inefficient drivers . . . . Driver courtesy is a must.

"3. Have meetings with the concrete contractors to discuss mutual problems and how these can be solved."

Mr. Lewis also mentioned some ways associations could assist the producer: "develop a film depicting in detail the correct placing, finishing and curing of concrete as it is related to small jobs . . . revival of the 'workshops' or local meetings that were held by the Portland Cement Association . . . practical demonstrations held by local building material associations of the proper use of various types of concrete."

Main points of Mr. Bathe's review of Ready Mixed Concrete Co.'s safety program were: "1. provide truck mixer units that are mechanically safe for drivers; 2. select with care the drivers of the trucks; 3. provide a follow-through training and safety program that will improve the drivers' abilities; and 4. provide additional incentives for drivers to work safely—a cash bonus."

"Good Drivers Mean Better Public Relations" was the way Roger Slugg, vice president, The Hamilton Gravel Co., titled his review of the Ohio Ready Mixed Concrete Association's driver training course. His summation capsuled a wealth of information on what constitutes a good driver, how to select, train and develop good drivers, and how good drivers are the ready mixed producer's primary vehicle for developing good public and customer relations.

Mr. Slugg said, "A good driver has above average intelligence. He knows himself, his equipment, and his job. He is physically fit and mentally alert. He drives defensively, and, as a result, avoids accidents. He is courteous and imaginative. He is socially adjusted. He respects authority and expects to fulfill reasonable requests of his supervisor. He respects the law. He obeys the rules of the road, and he makes allowances for those who do not. He sets high standards of conduct for himself and lives up to them." A poor driver has pretty much the reverse of these characteristics.

Driver selection includes setting up standards and choosing the man who best meets these specifications. Mr. Slugg said, "It is up to you to pick out the individual who, when properly trained, will remain with you as a loyal and responsible part of your organization, not for just the busy months, but for years to come. In our (Mr. Slugg's) company, we seek young—say 25 years old—married men with children, so that they have family and financial responsibilities. We prefer men with a farm background; they have a mechanical aptitude and resourcefulness, developed in youth; they rise to the occasion and keep things moving when in a jam."

When you find the man that fits your bill of requirements, "then follow up with a physical exam, a check with your local law enforcement agencies, and a check on his financial status with your credit bureau."

Driver training includes acquainting the driver with the company (rules, work hours, pay, standards, etc.) and its employees, his equipment, his job, his product (ready mixed concrete) and his customers. Under the watchful eyes of a driver-trainer or senior driver, the new driver learns about the new equipment he is to operate. He also becomes aware of the importance of service to customers. Further he sees that the company is constantly interested in delivering a high quality product; and whenever possible, it should be delivered when and where the customer wants it.

During his training, the new driver also learns that the customer of the company is a customer of everyone associated with the company, including himself. A driver's attitude and conduct can readily influence a contractor to reorder from the company, and reorders can directly increase the number of hours of work available.

As can be shown, the driver plays an important role in the public relations program of a ready mixed firm. Mr. Slugg said, "Good public relations don't take place in the front office! The real job of public relations in the ready mixed concrete industry is done on the public streets and adjacent to the construction site. And by whom? Your drivers."

Some of the facts brought out in S. H. Westby's review of the PCA market survey of ready mixed users were:

1. The top 23 per cent of all ready mixed users—contractors who purchase more than 10,000 cu. yds. annually—take the top 67 per cent of ready mixed production. Medium-sized contractors—those using between 1,000 and 10,000 cu. yds. a year—account for 59 per cent of the ready mixed customers and 31 per cent of ready mixed production. The balance—the 18 per cent of the contractors who purchase less than 1,000 cu. yds.—account for only 2 per cent of the annual ready mixed volume.
2. Of the 500 contractors surveyed by telephone, 52 per cent made no voluntary mention of complaints; 30 per cent mentioned only one; 14 per cent mentioned two; and 4 per cent mentioned three.
3. Complaint areas were listed in this order: undependable deliveries, price, quality, and quantity. 58 per cent of the contractors mentioned undependable delivery or service; 32 per cent mentioned price; 15 per cent said quality; and only 3 per cent mentioned quantity.
4. The average number of years a contractor buys from a producer, once he's established as an account, is 10 years. But during this period the contractor will also be buying from two other sources. Only one contractor in five buys all his ready mixed from one source. Those contractors who buy from multiple sources do so for reasons of price, service, competition, nearness of source to the job, and to diversify the source of supply.
5. Contractors could only remember effective promotion coming from 40 per cent of the producers from whom they

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A Market for Ready Mixed? Highway Paving Projects:

By GEORGE R. BATHE

All of you in our young industry can remember when supplying ready mixed concrete on large building projects presented a great challenge to our industry; this was when the contractor believed it was more economical to mix his own concrete. Our industry met this challenge, and in most cities the building mixers have been disposed of, and the contractors are using the services of our industry. *With the normal amount of highway construction located within the economical haul distance of our plants, plus the tremendous amounts of interstate highway and modern traffic-way construction, a large potential has developed for our industry if we can meet this new challenge.*

I should like to acquaint you with the area we serve and tell you about our company. Omaha, Nebraska and Council Bluffs, Iowa are located on opposite sides of the Missouri River, which is the boundary line between the two states. The metropolitan area we serve has a population in excess of 400,000. Six of our ready mixed plants are located in Omaha and its environs, and we are now completing construction on our seventh plant, which is located in Council Bluffs. We operate a truck mixer fleet of 93 units.

For many years our company has supplied most of the regular city paving in Omaha, and perhaps because of this paving experience, we were eager to supply ready mixed concrete on highway pavements, extending from the edge of the metropolitan area that we serve, into the heart of the city.

In 1957 we contracted with the Peter Kiewit Son's Company, of Omaha, to deliver a highway pavement project on U.S. Highway No. 75, extending from near the headquarters of the Strategic Air Command south across the Platte River near Plattsmouth, Nebraska. This project was 4.5 miles of 24′ wide, 9″ thick pavement. One of our ready mixed plants located at LaPlatte, Nebraska was about midway on the project. This plant is a dry batch type which charges the truck mixer with a ribbon feed. Our contract called for a minimum of 70 cubic yards per hour, and our average delivery was 125 cubic yards per hour, or 1,000 cubic yards per 8-hour day.

In 1958, we contracted for and delivered concrete on a project southwest of Omaha, consisting of 14.6 miles of 24-ft. wide and 9-in. thick pavement. 80 per cent of the project was built by the Roberts Construction Company of Lincoln, Nebraska and 20 per cent by the Peter Kiewit Sons' Company. This concrete was delivered from our plant located at Millard, Nebraska, which is approximately midway on the project. This plant is of the central mixer type. Our longest haul was 8 miles. Our contract called for a minimum delivery of 125 cu. yds. per hour, and on steady runs we delivered 135 to 140 cu. yds. per hour. On several occasions, we reached 180 cu. yds. per hour.

The interstate highway in Nebraska enters Omaha from the southwest. We are under contract with the Peter Kiewit Sons' Company to supply a section of the interstate, including two interchanges, which will require approximately 60,000 cubic yards. The pavement portion of this project is scheduled to begin in early spring. Our contract with the Kiewit Company calls for a minimum delivery of 125 cu. yds. per hour.

As ready mixed producers learned that we were supplying concrete for highway pavements, we were asked many questions. Probably the three most commonly asked were:

(1) "How are you able to meet the rigid specifications?"

(2) "How are you able to 'sell' the contractor?"

(3) "Did you find this type of work profitable?"

In answer to the first question, we have maintained close contact with the State Highway Department engineers for two purposes:

(1) To assist in developing ready mixed concrete specifications which are realistic and would result in our producing and delivering a product equal to or superior to that which a contractor could supply for himself.

(2) To make it clear that our company was willing to make a capital investment in equipment and to train our personnel so that the state would be assured of a high standard of performance.

In explaining how this has been accomplished, it is best to proceed step by step. On materials, we use the same limestone and sand-gravel for our commercial work that we use on highway pavements. This eliminates the fear by the inspectors that they might receive inferior aggregates on their work. Our aggregate handling in our plants has been engineered to provide for rapid unloading and large stockpiling so that the contractor can be assured of adequate supply. In Nebraska, cement is tested at the mills as separate silos are filled, with subsequent shipments being tagged to show that they were shipped from a state approved silo. This method of cement testing is less costly to the state than separate car testing. Our plants are equipped with silos which have separate compartments for state tested cement. The cement is delivered to the weighing hopper by a separate auger. Our plants are equipped to accurately weigh materials to produce concrete within the yield limitations and slump requirements of the specifications.

A sufficient number of truck mixer units is used to provide a uniform rate of delivery to the project. The truck mixers can discharge concrete with a maximum slump of 2-in. at considerably more than a yard per minute.

Our concrete is delivered to the project by traveling on the shoulders of the roadway, approaching the project from the rear and leaving the site in the direction of the progress of the work. Two different types of spreaders have been used by different contractors. One used a Blaw-Knox and the other a Jaeger. These units operate on different principles, but work equally well.

In general, the following equipment specification, pertaining to the

production and delivery of ready mixed concrete, would be fair to our industry:

It should require plant facilities that will provide accurate proportioning with a production of at least one cubic yard per minute for a specific paving project.

It should require sufficient delivery equipment to deliver the concrete to the project at a uniform rate with the delivery equipment being capable of unloading concrete having a slump of a maximum of 2" at a rate of at least one cubic yard per minute.

Often, highway specifications are inconsistent. For example, certain highway engineers require the concrete to be placed directly against the spreading equipment, not placed a reasonable distance in advance of the spreader; yet if they were to build highway pavements using reinforcing mesh, it is quite obvious that they would have to change their specifications because the finishing machine must travel a considerable distance in leveling the first layer of the slab to accommodate the wire-mesh mats.

We believe there is less segregation in the concrete when delivered by truck mixer than when it is rapidly discharged from a paver bucket. Low slump concrete delivered by truck mixer from both sides of the paving project, discharged at a low velocity and partially spread by the moving of the unloading chutes, places the concrete in an excellent position for final spreading and finishing. If it is the belief of certain highway engineers that the clamshell opening of the paver bucket is gradually opened and the concrete dispersed slowly on the subgrade, we would encourage these same individuals to expand the time and frequency of their visits to a paving project. In order for a paving contractor to develop high volume through an on-job paver, it is necessary that he charge the bucket rapidly and also discharge it rapidly.

Recently I inspected several paving projects, and in one case the contractor was using a drag behind the paver to save the dribblings that were extruded from the discharge end of the mixer, while the bucket was out on the boom discharging. In another case, a laborer was following the paving mixer with an end-dump truck, shoveling the dribblings into the truck. Yet, should one pebble drop from our chute before the concrete is placed between the forms, we are criticized. We are a third party and we must please the inspection group and our customer, the contractor.

For low slump concrete, the truck-mixer manufacturers must design their chutes so that they will carry the material without any side spillage. We are pleased to report that the manufacturer of the truck mixer that we have been using in recent years on paving projects took immediate action to change his design to overcome these problems.

Frequently, we hear it stated by highway engineers that more inspectors are required when ready mixed concrete is used. Let's analyze this for a moment. Let's assume that the aggregates and cement are tested and arrive at the ready mixed concrete plant and at the contractor's batching plant with the same inspection demand. We are even at this point. Now the paving contractor should have an inspector at the aggregate proportioning plant and he should have another inspector at the cement proportioning plant. On the project, there should be an inspector riding the paving mixer. This is a total of three. In our case, we have had only one inspector at our plant. The inspection force from the time the concrete is placed would be the same in either case. So it actually requires two more to inspect an on-job mixing operation than when ready mixed concrete is used.

Many times the contractor will indicate that when he mixes his own concrete he realizes a better yield control. Certainly the State Highway Department should feel confident that with the introduction of a third party, the ready mixed concrete producer, the yield control is much more accurate. Also, the State inspector should conscientiously strive to maintain balance in his mix design so that full yield is realized. *Our Nebraska specifications have a maximum slump of 3". However, for interstate and primary road construction they design the concrete mix for a maximum slump of 2". When we are producing concrete for use on super-elevated curves and steep grades, it is delivered having approximately a 1" slump.*

Last year at our Chicago convention, during the panel discussion on ready mixed concrete in pavement construction, it was stated that many of the states require a lower slump than a maximum 2". However, in many instances those specifications requiring a lower slump, such as 1" or less, also grant the engineer in charge the authority to increase the slump limit if satisfactory workability cannot be obtained within the specification limits. A low maximum slump requirement merely results in producing concrete at the maximum permitted, and with the unobserved slightest variation in moisture content the concrete produced would violate the maximum slump limits.

I believe that most highway engineers would agree that when materials are loaded into batch trucks at a location a considerable distance from the paving mixer, it would require an unusual communication system to keep the mixer operator informed of the variations in the moisture content so that the amount of water added at the paving mixer could be effectively adjusted. At a ready mixed plant, the moisture content of the aggregates and the mix adjustments are all under the supervision of one inspector. *To close the circuit between the project and our plant, we station our service representative, who is equipped with a mobile telephone, at the project.*

The second question asked by many ready mixed producers is "How are you able to 'sell' the contractor?"

When we are notified that bids are being invited from the contractors on a paving project which we believe to be within the economical haul distance of our plants, we meet with each contractor and review the plans. During this discussion, we explain the production that we will guarantee on the straight-of-way portion of the pavement. *The criterion of a production equals to 50% more than a contractor can achieve with one 34E dual drum paver has been very effective in closing our sales. Where there are interchanges consisting of loops and ramps, intersections and varying widths of pavements, we show that we can deliver concrete to more than one location simultaneously and supply concrete at a rate to meet their maximum demand, which results in our serving the project better than the contractor can serve it with his own equipment.* On the structures, it is usually far more advantageous to use ready mixed concrete than for a contractor to attempt to set up a plant for producing small volumes. *Those contractors who place the project in clear focus and view their costs accordingly realize that when a ready mixed concrete company can provide for them production meeting the specifications and their delivery schedule, it relieves them of much expense and responsibility in coordinating the shipment of materials, stockpiling, and arranging their labor and equipment*

forces to provide the same services. Unfortunately, some prejudiced contractors forget the many headaches involved in providing this coordination. Oftentimes they will comment that they have the equipment and that they might as well use it; yet you and I know if they don't use it, they won't wear it out. Sometimes it is difficult to persuade the contractor to place a realistic value on the costs of moving a plant in and out for a project, to evaluate the costs of materials which they lose when they are unable to reclaim the bottom portions of their stockpiles, the cost of providing water, demurrage on rail shipments, power, operating supplies, and the cost of more working capital.

It was mentioned earlier that when we deliver concrete on pavements we approach the project from the rear and travel on the shoulders of the roadway. We unload and leave the project by traveling in the direction of the progress of the work. When a contractor operates his paving mixer on the shoulder, he experiences a great deal of difficulty through the fill sections of the roadway because the batch trucks have to turn around and back to the mixer. This is always a headache for the paving superintendent to handle the batch truck traffic. Because of this confusion, the contractor's exposure to accidents is greatly increased. Delivering ready mixed concrete to a project is a much smoother and more efficient manner of transporting the materials to the project.

Those paving projects which have structures, interchanges and intersections are much easier to sell because the overall price for the entire project is very attractive when the contractor compares it with his costs. It is necessary that you equate or balance the various quantities to develop a fair selling price.

When these details have been completely discussed with the contractor, it is imperative that your materials, equipment and personnel be of such caliber that you will be able to perform in accordance with the schedule that you have promised to maintain. *The greatest injustice that a ready mixed producer can cause to a customer, damaging his own business and our entire industry, is to mislead the contractor and fail to perform during actual construction. It requires many successful ready mixed supplied jobs to erase a contractor's prejudice against ready mixed concrete as a result of just one poorly supplied job.* We certainly are going to do everything we can to perform successfully so that when one of our contractors comes into your area his immediate past experience will be a favorable one.

"Have we found this work profitable?" Yes, we have, because of the effect of high volume on our fixed costs. The increase in profit per cubic yard that you will realize on your other normal business is a direct result of the increased volume provided by the paving project and the paving volume should receive full credit. This increase of profit on normal work, plus the profit realized on the paving volume, is the actual profit on the paving project. Also, to have under contract diversified work is a hedge against a slump in any one class.

Each time we figure a paving project we travel all of the delivery roads, estimate the delivery time for the various segments of the project, and analyze our cost of delivery both from the standpoint of an hourly charge and distance. Our plant costs are equated on an hourly production basis for the separate volume demands required throughout the project.

Careful planning of the execution of the work is essential. Prior to the beginning of the paving operation, all of our key personnel who will be on the job meet with the key personnel of the paving contractor to receive a thorough briefing of the responsibilities of each individual. As the plans are reviewed, every detail is discussed: Our ready mixed trucks must have the right-of-way as we travel on the shoulders of the roadway. The form setting crew, the water wagon operator, and the hand finishers must thoroughly understand that our delivery units have top priority and must not be detained. The locations where our drivers will be permitted to flush off their chutes are designated. The laborers supplied by the contractor for handling our mixer chutes are instructed on how the chutes are to be rotated during the unloading. Contractors' representatives who sign each delivery ticket are instructed to do so in the minimum time. *On the paving project supplied last fall we were unloading six yards of concrete in three minutes, with a total time on the project of five minutes.*

Following this briefing session with the contractor's representatives, we select our first team of plant men and professional drivers. We impress them with the challenge that we face in serving the project and explain how each of them can help in meeting this goal. We are pleased to say that our men have in every case realized their individual importance in helping our company fulfill the commitment we made with the contractor.

Our industry is an important customer of the manufacturers of conveyors, bins, central mixers, trucks and truck mixers, as well as cement manufacturers and aggregate producers. We must impress upon them the necessity of continuing research and development toward improved materials and more rapid and efficient handling of materials to produce the end product that will meet the rigid pavement specifications.

It is our responsibility to keep these manufacturers informed of what is needed, which in turn provides the direction and purpose for their research and development program. We should encourage the manufacturers who have taken the lead to accelerate their program.

Another way in which the manufacturers can help our industry is to train their representatives to accept as normal the trend toward the use of ready mixed concrete in pavement construction. Sometimes the negative attitude of a manufacturer's representative in conferring with a contractor increases the resistance to our sale. *Manufacturers' advertising of pavement projects successfully served by ready mixed concrete companies would be most effective with contractors and specifying groups.*

In summary, if our industry is to meet this challenge, we must continue to work with specifying groups for a realistic specification, and to emphasize with them the many advantages of using ready mixed concrete. We must be willing to make the capital investment for equipment. The equipment must be engineered specifically to serve pavement projects. Our personnel must be trained as a team to serve a paving project. More careful planning is required to serve a paving project than is required for normal building construction. We must make sure before contracting for a job that our equipment and personnel are adequate.

Our company has much to learn about supplying paving projects, but based on the experience obtained thus far we are confident that we and you and our entire industry can and will meet the challenge of supplying ready mixed concrete for use in highway pavements.

Autoclavers Meet at

By HUBERT C. PERSONS

Members of the Autoclave Building Products Association, meeting at Toledo, Ohio, Feb. 16-18, learned that last year's predicted increase in autoclave plants—from 81 to 100—was exceeded by a substantial margin; the total autoclave plants in the U.S. and Canada now stands at 110. Association members also learned that an experienced research engineer, John K. Selden, had been employed as technical director. Further, a joint committee on corrosion, including research engineers representing five other associations, had been organized and a definite program laid out to develop ways of checking corrosion damage to racks and claves. Co-operating associations with representation on the committee are: NCMA; PCA; National Slag Association; Expanded Slate, Clay and Shale Institute; and National Concrete Products Association of Canada.

Association president Clyde Stewart, Illinois Brick Co., praised last year's officers in his opening remarks to the convention. Then Mr. Stewart, in announcing the hiring of John Selden as technical director, emphasized that Mr. Selden would be available to assist association members in solving problems relating to autoclave curing or setting up new plants.

Mr. Stewart also mentioned the association's new two-color illustrated brochure, AIA File No. 10-C, giving technical data and ASTM specifications for autoclaved block; 21,000 copies of this brochure already are being distributed. Another association talking point mentioned was the space being contracted for in *Sweets Catalogue* to provide design data for architects and engineers. Both Mr. Stewart and, later on in the program, A. N. Steiner, chairman of the technical committee, mentioned some of the other publications that are planned for future issue—ones on plant safety, equipment, corrosion, etc.

Autoclave Building Products Association membership now stands at 55 members companies located in 23 states, according to Peter D. Smith, Edgar D. Otto Co., who is chairman of the membership committee.

In a paper, "The Challenge of Autoclaving," H. E. Casey, sales manager, insulation division, Owens-Corning Fiberglass Co., described the basic chemistry of autoclaving; he emphasized the fact that temperature, pressure and fineness of particles all have an effect on autoclaving.

"You autoclave to get strength and accelerate the chemical process," he said. "You seek to produce a better product that gives better service. You can sell the properties of autoclaved block to architects and engineers because they are interested in elimination of or minimizing cracks in masonry."

Mr. Casey noted that while the autoclaved block industry has made great progress it still needs to gain general acceptance, requires new specifications, standard details, and more sales literature. He pointed out that a vast market exists for floor, roof, and wall systems made with autoclaved units. Because of high freight rates, local promotion of the product is important. Autoclave block producers should analyze their markets and know the selling methods and prices of competitors in other areas. He suggested that the Autoclave Association should have a representative in every population center who is familiar with local building codes for product approval. He called attention to the fact that the Owens-Illinois company invests 1½ per cent of sales in research and development and said that the autoclave industry needs make a substantial investment in a similar direction to win acceptance. "You have the finest product of its kind there is. You must sell what you have and keep your vision."

An explanation of why autoclaved products differ from normally cured block was given by Dr. Lawrence R. Blair, research chemist of the Johns-Manville Corp. The differences are believed to be due to physical changes in the components of the concrete, rather than chemical changes. This conclusion is based on the fact that chemical reactions between portland cement, water and silica under high pressure steam curing and normal curing conditions are almost identical. But because there are very great differences between the properties of the two products, "it follows," Dr. Blair said, "that the differences must be due to the formation of different physical forms of the same compounds."

Dr. Blair pointed out that: "Because the reaction rate of portland cement at atmospheric pressure is so slow, it may take periods of time, as long as several years, for the reaction to go to completion. As this reaction proceeds it is accompanied by volume changes which account for the expansion and shrinkage of normally cured products. Also, as the reaction progresses the strength of the product increases; and in the case of many cement products, this strength increase has been noted over periods of from 15 to 20 years. Thus, a normally cured product when delivered to the job is one which is developed only partially, and it may be expected to change during service."

Considering the effect of autoclaving, Dr. Blair said: "It should be emphasized that heat has a greater effect on the chemistry of a system than does pressure. Pressure is necessary to keep the water in the vicinity of the product so that it can react. Heat alone would drive out this water and the reaction would cease. However, once the water is contained, the rate of the reaction and the compounds produced by the reaction are sensitive to changes in temperature while they are only slightly sensitive to changes in pressure."

Monday morning's last feature was the presentation by Clyde Stewart of a film, "What is Autoclaving?" showing the operation of one of the plants

Toledo

of the Illinois Brick Co., at Chicago.

Walter Horn, president of Cinder Block, Inc., Detroit, chairmaned the afternoon session, which included a description of operations and work being done by the Besser School for block men at Alpena, Mich. Carl Nensewitz, director of the school and laboratory, used colored slides to show methods and materials used at the plant laboratory in connection with the school. "A quality concrete masonry unit is the best weapon with which to combat the competition of clay tile," Mr. Nensewitz declared. He also noted that an autoclave would soon be installed in the Besser laboratory for testing purposes.

A panel discussion on "Promotion and Publicity," was an outstanding feature of the afternoon program. Harvey A. Lee, vice president of Anchor Concrete Products, Inc., Buffalo, N.Y. was Moderator. Panel members included: J. W. Lacey, president Concrete Building Units Co., Richmand, Va.; Herbert Vincent, sales manager, Cinder Block, Inc., Detroit, Mich.; John W. Wheeler, president Ontario Building Materials Co., Toronto, Ont.; Loran Langsdale, of Langsdale Advertising, Baltimore, Md.

In opening the discussion, Mr. Lee pointed out that forming an association was an important step but one requiring careful planning in order to reap the benefits of working as an association. He said that careful consideration must be given to the desirability of presenting a united front; all telling the same story; undoing the ill will caused by cracked concrete masonry in years past; and creating, instead, good will with autoclaved block. "Regaining lost markets," he said, "is a task for some."

Questions each producer must decide for himself, he said, include: "Determining how much to spend on your own advertising and promotion; and how much to spend in cooperation with other local producers and with state associations. There is also the question of how much advertising and promotion help you should expect from the Autoclave Association, from the NCMA, the PCA, and, of great importance, how much of your sales dollar you are going to spend on advertising and promotion and to what extent will you back up these expenditures with a trained sales force?

"The successful operation of your business rests on how you answer these questions." As manufacturers of autoclaved block you represent the most successful element of the concrete products industry. Perhaps most of you already are doing these things correctly. Let's see what the panel members have to say."

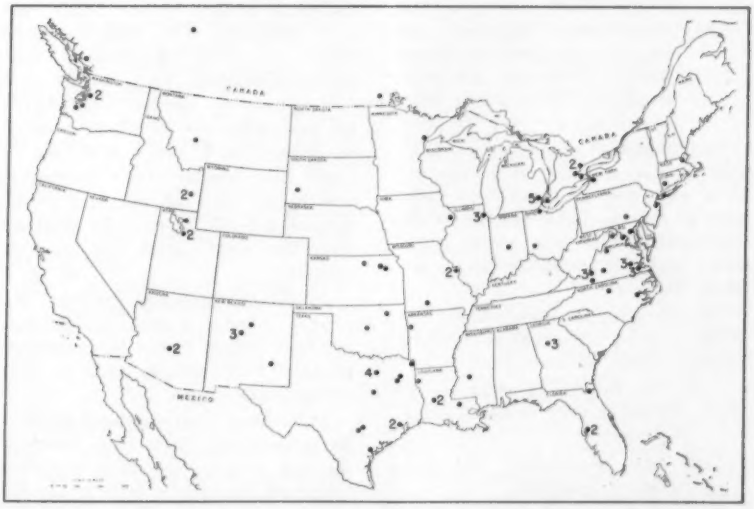
Mr. Lacey, next up on the rostrum, spoke about "Goodwill Building for Autoclavers Through Advertising and Promotion." "All producers want good advertising and effective public relations," he said. " . . . Good advertising may be defined as a believable promise made to the right audience. There are seven basic questions with which you may test your advertising. These are:

"(1) Does your advertising attract the right audience?
"(2) Does it hold your audience?
"(3) Does your copy create desires?
"(4) Do you convince readers that your product is a bargain?
"(5) Do you establish confidence?
"(6) Do you make it easy to 'act now?'
"(7) Do you give prospects a reason to 'act now'?"

Mr. Vincent discussed "How to Use Advertising and Promotion to Get Autoclave Specifications." We, at Cinder Block, Inc., believe in beaming our advertising message to the architects; We use publications issued by local and state societies of architects wherever possible. We also use occasional daily newspaper space and send out circular letters on all important projects. In all our advertising, of whatever nature, we continually emphasize the advantages of autoclave block."

Following the promotion panel, Phillip Buehner, of Buehner Block Co., Salt Lake City, Utah, described his company's promotion activities following the installation of four autoclaves. Their advertising is aimed principally at architects. Slides and brochure copy are pretested in offices of architects to get their criticism. The architects are friendly to the idea and co-operate fully. Ideas obtained in this way prove to be extremely helpful, Mr. Buehner said, and as a result Buehner autoclaved block are enjoying a better market.

An added feature on the Monday afternoon program was the showing of a colored film demonstrating the Cell-O-Stone system, an advanced application of automation to block manufacture in the plant of Concrete Building Units Co., Richmond, Va. The various operations were described by William G. Hueston while the film was running. It is claimed



Location of 94 Concrete Block Plants Using Autoclave Curing

In March 1959 there were 86 block plants in the U.S. and 8 plants in Canada. Numerals indicate number of plants at one locality. Autoclave curing is also used in 10 other plants in the U.S. and 6 plants in Canada to produce sand-lime brick and other products. This does not include plants autoclaving asbestos-cement products.

that the Cell-O-Stone system will save $25,000 or more a year in a one-machine, two-shift block plant. The system requires three 6½ ft.-diameter, 88-ft.-long autoclaves with a combined capacity of 2,160 block for a daily production of 17,000 units. Because of many requests the pictures were run again at the close of the Wednesday meeting.

President Clyde Stewart, ending Monday's program spoke on "The Need For Full Support of Your Autoclave Association." He said, "The nature of a problem will usually dictate how it is to be solved. If it can be set up with a mathematical equation, that is the way it should be done. If it is a problem requiring judgement, then logic, reason and experience are the factors governing your approach. Your solution may be gained through a considered guess.

"All systems have two things in common: known quantities and unknown quantities .In seeking a solution to success in autoclaving let us look at the known and unknown quantities. The known factors are:

"(1) More stable concrete is developed. No other system has been more successful than curing in a pressure vessel. The stability attained through autoclaving has been minimized by many. If there is a more glaring fault in concrete than shrinkage cracking, what is it?

"(2) High strength concrete can be produced with consistency.

"(3) Drier concrete is produced with a lighter color.

"(4) Autoclaving stabilizes unsound aggregates, increases sulfate resistance and practically eliminates efflorescence.

"These known quantities are sales and promotion tools. It is the job of a vigorous association to make known the available facts to the architect, specification writer, engineer, and the consumer on a national basis.

"So much for the known quantities. What is more important are the unknowns. Some of these are:

"(1) The fire rating of autoclaved units made of various aggregates.

"(2) The durability of autoclaved products.

"(3) A dependable method of determining the shrinkage of autoclaved and non-autoclaved products.

"(4) The shrinkage values for autoclaved products having different aggregates.

"(5) What is the solution to the corrosion problem?

"(6) What is known about autoclaving of 200 or 300 psi?

"(7) What organization is available for technical data to national specification agencies?

"(8) Where does a producer go to get impartial information as to the cost of autoclave equipment, cost of product, equipment performance and suggested plant design?

"Is it not peculiar that an industry having an investment in plants and equipment of almost one hundred million dollars has virtually no information as to fire rating, durability, etc., of its product? Certainly producers cannot accomplish the required research singly. Producers are set up to produce a product, not to do research. Co-operative efforts from producers and suppliers through an intensively interested association is the solution.

"Painful as it may appear to be at the outset, the key to the solution is funds. Let me give you an example of a similar industry and what they are doing to solve their problems on a national basis. There are approximately 650 producers of clay products in the United States. Of these, approximately 140 support, in addition to local groups, two centralized organizations. The Structural Clay Products Institute and the SCPI Research Foundation.

"Last year the promotion and technical budget of the SCPI was over $600,000. The budget of the SCPI Research Foundation was about $500,000. This means that each producer member contributed for promotion and technical research an average of $7,000 a year. We all know how effective their promotion has been. You can no longer call a brick a brick. It must be qualified with the words sand and lime or concrete.

In another associate industry, the cement industry, a small mill producing four million barrel per year contributed $100,000 per year to their national association.

If we have what we think we have in autoclaving, let's first prove it through co-operative effort and then sound off through a wide awake national association. Remember you can't save time by simply neglecting to wind your watch."

On Monday night a small group of autoclavers participated in a dinner meeting to discuss late developments in foam concrete. Karl Langnefors, president of Swedish-American Industries, Clearwater, Fla., led the discussion with a description of methods used in the original Durox plant in Sweden where 16 autoclaves are in operation. He also told of the difficulties encountered in building the $1,150,000 plant of the U.S. Durox Co. near Denver, Colo. Four other similar plants are to be built in the United States.

John K. Selden, the Association's new technical director described the manufacture of Siporex slabs for walls, floors and roofs, as well as Siporex block. The plants are in Mexico and Venezuela. Mr. Selden also told of several years of work for Owens-Illinois Glass Co. in developing a type of foam concrete.

At the opening of the Tuesday morning program, President Stewart introduced Mr. Selden, newly appointed technical director of the Association who was scheduled to speak on "Past, Present and Future of Autoclaving."

Mr. Selden said that autoclaving is not new but has had many industrial applications for a long period. He said there had been many patents on methods of hardening concrete with steam and carbon dioxide. Mr. Selden referred to the fact that the Autoclave Association was formerly the Sand-Lime Brick Association, with the name having been changed in 1938. He referred to the valuable research on autoclaving done by Carl A. Menzel of the Portland Cement Association and reviewed developments up to the present.

"There must be cooperation between all groups in the concrete block and aggregate industry," Mr. Selden said. He urged members of

● **Technical experts exchange views: from left, J. K. Selden, J. J. Shideler, Professor E. L. Saxer, and C. A. Menzel.**

the association to look for all possible new autoclaved products and expressed the opinion that a separate organization might be formed to handle new developments.

A panel discussion on "Concrete Masonry Units," led by Professor E. L. Saxer, chairman of the civil engineering department, Toledo University, was the second Tuesday program feature. In addition to Professor Saxer, panel members included J. J. Shideler, product development section, PCA, speaking on "Recent Developments in Carbonation; Carl A. Menzel, concrete consultant for PCA, speaking on "Current Developments in the Relative Humidity Test Method," and Mr. Selden on "Autoclave Drying for Stubborn Aggregates."

Professor Saxer used slides to show results of freezing and thawing tests with autoclaved block made with pozzolans and various admixtures. Six types of aggregates including slag, were used. The tests were run in two series of 50 cycles each. Besides slag, the mixtures used included portland cement and fly ash, cement and silica flour and cement with sand and lime.

Mr. Shideler declared that the subject of carbonation shrinkage of concrete units is becoming more and more important as time goes on. He reviewed work done in the PCA research and development laboratories on the effect on concrete block, of various degree of humidity. Tests were made on block stored at 80, 60 and 10 per cent humidities for periods as long as two years. Measurements were made to determine shrinkage and weight increase due to carbonation. Mr. Shideler said that autoclave products were subject to these changes under certain conditions.

● Another gathering of experts: from left, Karl Mensewitz, J. J. Shideler, Richard Frazier, and James B. Maher.

Mr. Menzel told the block men that relative humidity is one of the most important factors influencing the moisture conditions of concrete. Cracking is the No. 1 problem of the concrete masonry industry. He used slides showing the effect of changes in humidity on concrete block. He declared it is important to dry block regardless of the method used in curing. In concluding his remarks, Mr. Menzel emphasized the fact that the crack resistance of a concrete masonry wall is influenced by many factors. Improvement in crack-resistance he said, can be realized if the following measures are taken:

(1) Dry the block adequately to reduce subsequent shrinkage in the wall. A practical treatment to reduce carbonation shrinkage in non-autoclaved block would be helpful if it could be accomplished economically.

(2) Use an adequate cycle of autoclave curing and drying to reduce the potential moisture and carbonation shrinkage of the block.

(3) Increase the tensile strength and toughness of block by a more favorable type and grading of aggregate, higher cement content, better compaction of the concrete during molding, and improved curing and drying procedures.

(4) Use block with favorable design features such as a three-core block with a substantially thickened face shell at the center core hole and better yet, a two-core block with core holes joining the center web with large fillets or similar improvements in design.

(5) Use masonry wall patterns which will provide the maximum possible cross sectional area of concrete across the path of potential cracks through the vertical mortar joints.

(6) Use strong mortar and good workmanship to bind the end of block together in well-compacted and well-cured full vertical mortar joints to increase the tensile strength of the wall.

On Tuesday afternoon a bus load of men attending the convention were guests of Cloyd Fellabaum and his three sons on a visit to the modern plant of the National Cement Products Co. The outstanding feature of the plant is the battery of four 110-ft. autoclaves built by Bros, Inc., Minneapolis. Quick-opening doors and accessories were made by Struthers Wells Corp. (See CONCRETE, December, 1958, pages 22 to 25).

Following the plant inspection the block men were taken to the Concrete Laboratory of the University of Toledo where Professor Saxer explained tests under way for the NCMA.

A panel discussion on "Cause and Control of Corrosion," was the opening feature of the Wednesday morning program.

Moderator for the panel discussion was Richard Frazier, vice president in charge of research and production of Anchor Concrete Products, Inc., Buffalo, N.Y. Panel members were E. W. Bauman, Washington, D.C., managing director, National Slag Association; Henry Toennes, NCMA development engineer and Clyde Stewart, production manager, Illinois Brick Co., Chicago.

Mr. Frazier emphasized the importance of the corrosion problem, pointing out that corrosion sometimes results in large items of expense in block plants by reducing the useful life of racks. He expressed the belief that progress is being made toward solution of the problem. He reported that in his plant tests were being made of a stainless steel rack of 108-block capacity. These racks, he said, can be purchased for $300 in lots of 100.

Mr. Bauman reported that the joint committee on corrosion has been active and has made some progress. He said there is a lack of concerted action in following up findings made at individual plants. The problem is now being analyzed more realistically, he said, and various factors are being evaluated.

Corrosion of racks and to some extent in kilns, was found to be a problem in about one-third of the block plants covered in an NCMA survey, Mr. Toennes reported. "We have worked with block plants on evaluating protective coatings," he said, "but thus far no coating has been found that is economically feasible for use on racks. Some coatings have been tested for use inside of kilns."

Mr. Toennes said laboratory work was being done on a means of predicting potential trouble from aggregates. He said expanded slag aggregate had been one cause of trouble. A simple test for determining the soluble sulfide content of aggregates has been developed, he said. This, he said will tell in advance whether

an aggregate is likely to cause corrosion. He also reported that laboratory work had been done to determine the presence of sulfides at various stages of autoclaving. Sulfide have been detected in kiln vapor just before blow-down, he said. The most promising solution of the corrosion problem he asserted, appears to be the use of an inhibitor in the aggregate, in the concrete mix or in the water. Studies in this direction are continuing.

Mr. Stewart, the final panel speaker, reported on "Corrosion Study—Metals and Coatings." "This is a progress report on materials and coatings under test in production autoclaves in a five-autoclave plant using expanded slag," (Waylite) Mr. Stewart said." The sulfide content as tested by the NCMA method of test is as follows:

Fine slag	.025% sulfide
Coarse slag (ground)	.010% sulfide
Fine slag (passing 20 (mesh)	.085% sulfide

During the curing cycle and after blow-down, hydrogen sulfide can be clearly detected in the vicinity of the autoclaves.

Original racks made of 5/16-in. thick mild carbon steel, collapsed from corrosion at nine months. Rebuilding and replacement costs were about $12,000.

At three years it was necessary to sand blast the bottom ¼ of the autoclaves, weld corrosion pits which were in many cases 2-in. in diameter and the full ⅛-in. corrosion allowance deep.

"The life of normal brass trim exhaust valves is approximately one month. Monel trim or stainless steel appear to be satisfactory after three years.

"The corrosion has been identified by U.S. Steel corrosion engineers as typical lamination pit-type acid corrosion.

"Generally speaking, rack corrosion is most severe on interior uprights and the vertical leg of the shelf angles. The life of the exterior uprights appear to be three times that of interiors verticals with no protective coating on either.

"Autoclave corrosion appears to be severe only at the bottom quarter.

"Brush-applied and spray-on coatings have been under test for periods up to three years. To date the only coatings tried that have given protection over six months are coal tar base coatings and possibly lumnite cement-latex coatings.

"At this time, in the absence of a more practical solution through coatings or metals, it appears practical to increase the rack metal mass especially the uprights from angles or channels to solid 1x2-in. bars. Through simplified rack design it has been possible to decrease the rack cost from $178.00, (114-block contour rack using angle uprights) to $115.00 (108-block rack using solid bar uprights.)

"To date, the cheaper rack, coated at six-month intervals with coal tar, appears to be a temporary solution. Assuming the rack life to be five years, the cost per rack, per year is $39.00. Rebuilt contour racks costing $178.00 with a rebuilding cost of $33.00 and a life of two years, resulted in a rack cost per year of $105.00. Thus a saving of approximately $66.00 per rack per year."

A paper on "Safety in Autoclave Plants," presented by R. J. Brown, assistant chief engineer of the Hartford Steam Boiler Insurance Co., was illustrated with pictures of the result of accidents to autoclaves, vulcanizing equipment and other pressure vessels. Mr. Brown emphasized the fact that autoclave operations are the greatest hazard in a block plant because of the high pressure involved. "Care and diligence are the best safeguards," he said. "Failure of operating personnel to close doors properly has been a cause of accidents. Safety locking devices and safety signals are now a part of most installations. It should be remembered," he said, "that safety devices must be properly maintained and inspected to afford maximum protection." He said that in most instances the accidents investigated by his company had been caused by carelessness.

Mr. Brown's paper was followed by a review of "Autoclave Door Types," by James B. Maher, engineer, Chicago Bridge & Iron Co. The paper was illustrated with photographic slides and graphs. (See CONCRETE, Feb., 1959, pages 28 to 32.)

"Boilerless Autoclave Plants" were described by John B. Klingel, of Struthers Wells Corp., Titusville, Pa. as a feature of the Wednesday morning session. In this system the autoclave itself is a steam generator. The heating element is a fired heater containing vertical coils through which hot oil is pumped. Steam is generated by heat exchanger coils in the bottom of the autoclave. Condensate is returned to the autoclave or to a storage tank.

Results of field tests of building materials are more convincing to architects than laboratory reports, the block manufacturers were told by Orville Bauer a Toledo architect at the opening of the Wednesday

● Directors for 1959-60 are: 1st. row, past president Dale Cobb, Jackson Ready Mix, Inc.; Walter Horn, Cinder Block, Inc.; Peter Smith, Edgar D. Otto Co.; 2nd. row, secretary-treasurer Ralph Cromis, Boice Builders Supply; president Clyde Stewart, Illinois Brick Co.; and John Wheeler, Ontario Building Materials, Ltd. (Fred Reinhold, Anchor Concrete Products Co., was unable to attend).

afternoon program. Mr. Bauer, representing John Richards, national president of the American Institute of Architects, spoke on: "The Architect's Viewpoint of Quality Masonry." He said that people who want to build homes are looking for the most attractive and durable houses to be obtained for what they can pay. "They want good, substantial, functional houses at lowest cost. In the past," he said, "architects have sometimes had to apologize to clients for concrete block because of cracks and wet walls. In such instances the home owners always blame the architect."

In considering concrete masonry units, Mr. Bauer said the architect wants to know about color, texture, volume change, shrinkage, strength, water-resistance, chemical stability and economy.

"Ask yourselves what autoclaving does for these properties," Mr. Bauer told the block men. He suggested that an effective demonstration of the advantages of autoclaved block for architects would be to use autoclaved block for half of a building and standard block for the remainder of a building.

The Wednesday afternoon program also included brief descriptions of a number of new autoclave plants built by ABPA members. Carl F. Spickelmier of Spickelmier Industries, Indianapolis, said the installation of an autoclave in their plant permitted them to reduce block inventory to as low as 50,000 units and always have dry block in stock.

The last program feature of the convention on Wednesday afternoon was a panel discussion on "Batching Automation." Moderator was Carl Hubscher of Toledo Scale Co. who explained than an important purpose of automation in batching was to insure consistency in batching. Panel members were: Russ Ferrer, Allco Automatic, Inc., and Automatic Controls, Inc. of Seaford, N.Y.; Gar Kachel, sales engineer, Ramsey Engineering Co., St. Paul, Minn., and R. J. Phillips, sales engineer, Toledo Scale Co.

The panel members explained that, at present, adding machines and typewriters as well as recording scales can be incorporated in automation systems, but that full automation of all processes was a future development.

As the convention closed election of directors for the 1959-1960 term was announced as follows: Clyde Stewart, Dale Cobb, Ralph E. Cromis, John W. Wheeler, Peter Smith, Walter Horn and Fred Reinhold.

10 Huge Prestressed Girders Roof a Dallas Bowling Alley

● Dallas traffic stops to let the big girder in to the site.

These 102½-foot, 40-ton prestressed concrete girders are believed to be the longest precast concrete girders ever produced in Texas.

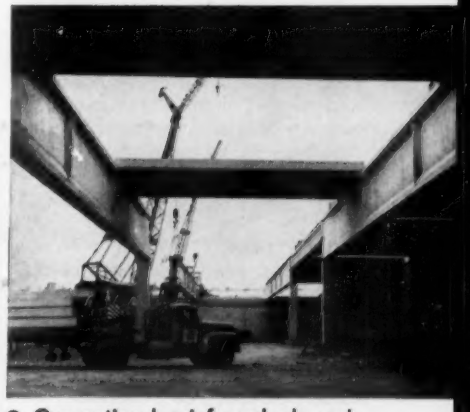
Ten massive girders this size were produced by Texcrete Structural Products Company, Dallas, for the 44-lane Cotton Bowling Palace being built by J. Curtis Sanford at Inwood Road and Lemmon Ave., Dallas (Jacob E. Anderson, architect).

Each is a combination pretensioned and post-tensioned girder, with 28, ⅜-in. strands, and 84, ¼-in. wires in seven draped post-tensioned cables. Width of top flange is 24 in.; thickness of web, six inches; and width of bottom flange, 18 in. Depth of girder is 6 ft.

Delivery from plant to job site required a tandem axle tractor with a three-axle steerable trailer especially built for this job. Two bridge cranes lifted the girders into position on the building, directly from the tractor-trailer, in an operation which took less than 45 minutes from the time each girder arrived.

Conventionally reinforced channels, 12 in. deep, 2 ft. wide, and approximately 27 ft. long, spanned the distance between the girders. In all some 42,000 sq. ft. of these channels were cast for this job by Texcrete Structural Products Co.

● Two cranes hoist the lengthy girder into place on the building.



● Conventional reinforced channels bridge the span between girders.

Ready Mixed Convention Report

(article begins on page 16)

buy. And these 40 per cent were mostly remembered for give-aways.

6. In answer to the question of how ready mixed sales contacts were made; 78 per cent of the contractors mentioned personal contact, 40 per cent listed phone contacts; 36 per cent said they were contacted by mail; and 15 per cent said they had not been contacted in any manner.
7. Reasons for changing ready mixed source; 42 per cent of the contractors said the most important factor would be that the new supplier was nearer the job; 26 per cent listed dependable and prompt delivery; 23 per cent mentioned price.
8. Job mixing is still done by two out of five contractors. These are mostly the very large jobs or the very small.
9. To compete for the jobs where job mixing is now the practice, the ready mixed producer should: increase discount on large jobs; lower the price for small repair jobs; use smaller trucks for those jobs that are inaccessible to the large trucks; and supply service to the small towns where ready mixed is not available.
10. Markets where quantities of ready mixed could be sold are highway paving projects, airport runways, and farm construction.

Other talks at the convention included Murray Simpson's "Progress Report on Equipment for Removal of Solids from Waste Concrete." Mr. Simpson, president, Super Concrete Corporation, Washington, described and showed slides of the company's two new Worthington material classifiers for reclaiming sand and gravel from left-over concrete. With this equipment and a sludge pump for handling cement slurry, the company reclaims 7 to 10 tons of sand and gravel per day at each of their plants; and, further, the company has reduced haul-away problems by 50 per cent.

Peter J. Verna, vice president, Concrete Supply Co., Charlotte, N.C., and also president, Prestressed Concrete Institute, told of the tremendous volume he expects the prestressed industry to be producing in the next few years. In round dollars, he expects production in 1960 to be between $500 million and $1 billion. And a lot of this concrete will come from ready mixed plants. But the prestressed business isn't easy, it takes a wealth of trained personnel, much more so than ready mixed, pipe, or other precast products.

The session on Monday afternoon was devoted entirely to the operation of state and area Associations. Wednesday afternoon's session centered on two-way radio. And on Thursday, three speakers discussed the accomplishments of three Concrete Industry Boards—one in New York, and the others in Detroit and Atlanta.

Next year's convention, which will be combined with the biennial show, will be held in Chicago, "The Windy City," Feb. 15-19.

■

ASTM Revises Fifteen Cement Specifications

Of major assistance to engineers, public agencies and laboratories concerned with the national highway construction program, and to the users of cement in concrete structures and buildings, is the new compilation of ASTM Standards on Cement. The general refinement of standards by Committee C-1 on Cement is evidenced by the up-dating of 15 of the 34 standards included. Of particular interest are the revisions in the Specifications for Portland Blast-Furnace Slag Cement (C 205) and the Methods of Sampling Hydraulic Cement (C-183).

In addition to the standard specifications, methods of test, and definition of terms, appendixes contain a Manual of Cement Testing and detailed information to assist the plant chemist in the performance of the cement tests; a list of selected references; and a discussion on analytical balances and weights. This 13th edition supersedes the 1957 edition.

Copies of this book may be obtained from ASTM Headquarters, 1916 Race St., Philadelphia 3, Pa. at $3.50 each.

ASTM Compiles Concrete And Aggregate Standards

A compilation sponsored by ASTM Committee C-9 on Concrete and Concrete Aggregates and Committee D-4 on Road and Paving Materials includes all of the standards prepared by Committee C-9, but only those for aggregates and other selected highway materials developed by Committee D-4. In addition it contains pertinent specifications for cement which are under the jurisdiction of Committee C-1 on Cement.

The book contains 101 standard specifications, methods of test, recommended practices and definitions of terms for mineral aggregates, concrete, concrete curing materials, expansion joint fillers, and miscellaneous related specifications. References are given for specifications on concrete reinforcing steel, paving block and brick, and bituminous and non-bituminous road materials. Of the included standards 46 are new or revised since the 1956 edition, which is superseded.

This publication will be useful to producers and consumers of mineral aggregates, concrete, and highway materials, to highway engineers, specification writers, testing and inspection personnel, and research and engineering institutions.

Copies of this book may be obtained from ASTM Headquarters, 1916 Race Street, Philadelphia 3, Pa. at $4.75.

■

New Manual On Concrete Finishes Now Available

A simplified "Manual of Recommended Practice for Cast-In-Place, Exposed, Architectural Concrete Finishes" has just been published by the Concrete Industry Board, Inc., of New York City.

The 15-page Manual is prepared in specification form, to be used either in part or in its entirety to simplify obtaining smooth surfaces, lack of blemishes, elimination of fins, honeycombs, etc. It is explicit regarding detailed procedures to bring about the desired results.

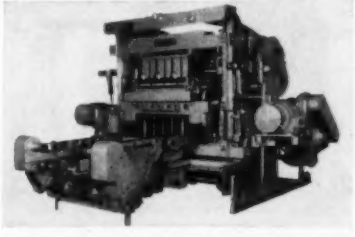
The 5 x 7-in. pocket size manual, priced at $1.00 may be obtained by writing to The Concrete Industry Board, Inc., Room 2503, 220 East 42nd Street, New York 17, N. Y.

A Look at What's New in

EQUIPMENT and MATERIALS

Bergen Introduces New "36" Block Machine

Bergen's new "Thirty-Six" block machine is the latest addition to the ranks of high-production machinery in the concrete block industry. Producing 33-1/3 to 50 per cent more units per cycle, the Bergen "Thirty-Six" makes units up to 36" long and in heights up to 12".



The concept and design of the Bergen "Thirty-Six" is in keeping with the growing need for more economical block production and the increased variety of block styles. A number of unique and distinctive features are built into this machine in order to accomplish these results.

The vibrator motors need not be moved when changing from 16" to 18" block lengths, and the pallets are accurately located and positioned under the mold without critical adjustments. Rotary-type agitation is used to insure proper filling of the molds. Bergen's exclusive Contra-Torque shaft keying and unique Harmonic Drive provide smooth machine operation and block handling at all speeds. Another significant feature of the Bergen "Thirty-Six" is its open construction which permits easy access to all parts of the machine.

The manufacturer claims that this versatile block machine will maintain maximum production efficiency with an absolute minimum of physical effort and maintenance.

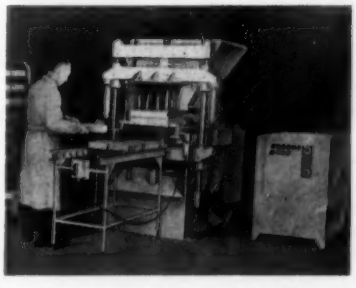
Complete information is available from the Bergen Machine & Tool Co., Inc., 189 Franklin Avenue, Nutley 10, N. J.

Enter U36 on Inquiry Card

New Brickcrete Machine Is 50 Per Cent Faster

Fifty per cent faster than former models and designed for one-man operation, the new FA Brikcrete machine can produce a wider range of concrete masonry units and patio stones, according to an announcement by Brikcrete Associates, Inc., Holland, Mich.

This fully automatic machine has a production rate of approximately six pallets per minute and can make Brikcrete units in three lengths (16, 12, 8-inch), three thicknesses (8, 6, 4-inch), and two heights (4, 2-2/3-inch), plus a full line of 22 Terracrete patio stones ranging downward from 16 x 16 inches in two heights.



"The versatility and production economies of this machine will enable Brikcrete manufacturers to supply a size and type of unit to conform with practically every kind of construction or architectural styling at low cost, and the labor savings can pay the original cost of the equipment within two years," says Frank

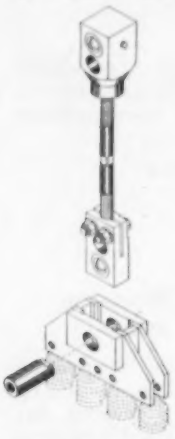
R. Short, Brikcrete sales manager.

Full details will be furnished by Brikcrete Associates, Inc., 341 West 25th Street, Holland, Mich.

Enter U37 on Inquiry Card

Feedbox Spring Equalizer Assembly For Vibrapacs

Besser Company has introduced a new Heavy Duty Feedbox Spring Equalizer Assembly. This assembly can be applied to all Vibrapacs.



This new assembly will equalize the tension of the springs and elimnate the strain and flexing of the connecting link rod. The link ends are fitted with bronze bushings that can be replaced when worn.

When it becomes necessary to increase or decrease spring tension, easy and rapid adjustments can be made from the floor.

The Besser Company, Service Department, Alpena, Michigan will furnish full details on request.

Enter U38 on Inquiry Card

How Eight Basic Colors Can Produce 64 Shades

How 64 colors, tints, and shades can be produced from eight basic colors is shown in the new Colorcrete Color Chart just released by Colorcrete Industries, Inc.

This chart illustrates the eight base colors and the 24 tints that can be obtained by dilution with white Colorcrete. In addition to these 32 tints, Colorcretors can obtain 32 shades by diluting with gray Colorcrete. Colorcrete, as applied to any masonry surface, is a semi-liquid plastic material which spreads evenly over the surface and is forced into cracks under air pressure. Being cementitious it fuses with and becomes an integral part of the surface. Colorcrete material is furnished as a dry admixture of all ingredients, including base, pigments, water proofing, vehicle, etc. It is also now available in a freight-saving cencentrated form to which cement and sand are added at the local plant or jobsite. All eight base colors can be shipped in either ready-mixed or concentrated form.

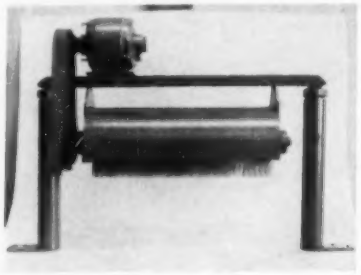
Copies of the new color chart are available on request to Colorcrete Industries, Inc., 331 Ottawa Avenue, Holland, Michigan.

Enter U39 on Inquiry Card

New Block Machine De-Burring Brush

A new and highly efficient de-burring brush has recently been developed by Columbia Machine at their mid-western plant in Mattoon, Illinois.

The brushes, made of tough, pliable fibre, are easily replaced. A ¼ horsepower single phase motor operating on 115 volt A.C. with fully guarded V belt, furnishes the power,



and may be plugged into the plant lighting system. The attachment fits the standard 20″ and 26″ Columbia power rollaway and can be changed from 4″ to 8″ or 12″ high block in only a matter of minutes and is easily adaptable to any make block machine.

Enter U40 on Inquiry Card

New Bulletin Describes Advantages of Pozzolith

Simplifying the complexity of concrete production, a new six-page Master Builders bulletin contains a concise analysis of the nine vital factors governing the production of high quality concrete.

Charts, graphs and photos based on field and laboratory tests show how the use of Pozzolith give concrete increased flexural, bond and compressive strength; effectively entrained air; increased workability and durability; reduced shrinkage and permeability; initial retardation and resistance to scaling.

For a free copy of Bulletin P-36B, write: The Master Builders Company, Cleveland 3, Ohio.

Enter U41 on Inquiry Card

Lithibar Announces New Concrete Block Cuber

The Lithibar Company of Holland, Michigan, a thirty year old manufacturer of machinery, announces the development of a materially improved block cuber in its program for the development of labor saving equipment for the block producer.

This Mercury cuber is manually controlled and is operated by compressed air. It is designed to enter the block rack and clamp together three 8″ blocks or any other combination of blocks made in molds up to 24″. Clamping is accomplished by pressing a button actuated valve which controls the clamping air cylinder. With the blocks securely clamped together, the operator then removes the blocks from the racks by manual movement of the cuber. Vertical movement is obtained by two button actuated air valves which control an air cylinder.

Placement of the blocks can be made so the cored holes are vertical or horizontal. This is accomplished by manually turning the control handles and the clamp assembly 90 degrees during the time the blocks are transported from the rack to the cubing platform. A wood cubing platform which incorporates slots may be used to permit passage of the lower clamp arm when the blocks are released with the clamp arms in the vertical position. The complete Mercury Cuber comes equipped with a muti-directional monorail.

Enter U42 on Inquiry Card

New Folder Describes Truck Mixer Chutes

A new four-page, three-color folder illustrating the use of the Monarch Dyna-Chute has been released by the manufacturer, Monarch Road

Machinery Company. Dyna-Chute, an electric power hydraulic control, raises, holds or lowers the discharge chutes on ready-mix trucks. Copies are available upon request from the company at 1331 Michigan Street, N. E., Grand Rapids 3, Michigan.

Enter U43 on Inquiry Card

New Colorcrete Formula Cuts Costs 50 Per Cent

To save 50 per cent or more on the cost of Colorcrete materials and to provide a greater color range with smaller inventories, Colorcrete Industries, Inc., Holland, Mich., has formulated its new Concentrated Colorcrete to which other necessary materials can be added locally.

The manufacturer states that one bag of Concentrated Colorcrete will make 12 bags of material equal in working efficiency to the standard Ready-Mixed Colorcrete, simply by adding 300 pounds of cement and 800 pounds of sand. Thus, the Colorcretor pays freight on 100 lbs. of Concentrated material, instead of on 1200 lbs. of Ready-Mixed.

Another advantage of this new product is that the Colorcretor may offer a more complete color range without carrying large inventories. Standard colors have been reduced from 15 to 8, according to Colorcrete Industries which provides 32 colors and tints with only eight stock colors. The other 24 can be obtained by dilution with white Colorcrete.

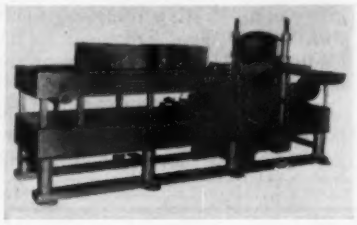
In addition to the 32 tints, Colorcretors can obtain 32 shades by using the eight base colors with gray cement and thus dilute them to produce 24 other shades, making a total range of 64 colors, tints, and shades.

"With such an amazing variety, ranging from strong accent colors to delicate pastels, the field for Colorcreting operations is immeasurably increased," says Russell C. Reeve, president of Colorcrete Industries.

Enter U44 on Inquiry Card

New Fleming Splitter Eliminates Slab Cubing

A new block splitter which eliminates the necessity of cubing slabs before splitting has been announced by the Fleming Manufacturing Co.,



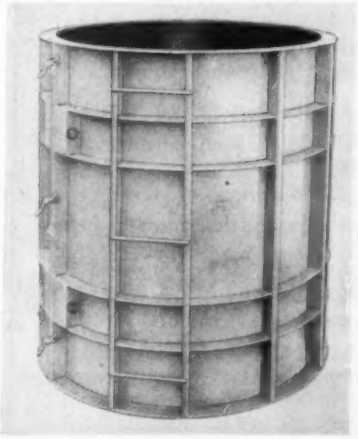
Cuba, Mo. This splitter operates at the rate of three thousand cycles per hour. It was specifically designed to split slabs faster than any high production, triple-block machine could produce them, thus freeing pallets and racks for the following day's production. Fed directly from the rack by one man with a power cuber, it completely eliminates the necessity of cubing or palletizing the slabs prior to splitting.

Enter U45 on Inquiry Card

New Bridge Column Forms By Economy of Des Moines

Designed primarily for use in bridge and overpass construction, the new Efco bridge column forms are ideal for all types of heavy construction where sturdy columns are needed. They are also adaptable to other uses, such as the forming of pier nosing. For this purpose, they are combined with regular Efco forms, the latter being used to form the sides of the pier.

Efco bridge column forms are



available in a variety of sizes. For columns up to 4 ft. in diameter, the forms are furnished in 180-degree sections 4 ft. high. Larger diameters are fabricated in 90-degree sections or less.

Easy-operating Efco plate clamps are utilized on both horizontal and vertical joints. The clamps used vertically are for fast erection only, to save valuable crane time. After the crane used in the column form erection has been moved to other productive work, bolts are then placed and tightened to provide full strength of form design. Since the forms are precision-made, stripping is easy. A crane simply lifts off the form vertically as though it were a sleeve.

Literature and complete information is available on request to Economy Forms Corporation, Box 128-H, Highland Park Station, Des Moines, Iowa.

Enter U46 on Inquiry Card

New Low-Cost Saw By Cardinal Engineering

A new, low-cost stone cutting saw that is 30 per cent lighter in weight and 50 per cent lower in initial cost is being offered by Cardinal Engi-

neering Corp., 144 Burnside St., Philadelphia 27, Pa., pioneers in the development of low cost, high production masonry blades and saws.

The new S-200 Cardinal stone saw, powered by a full 2 hp. totally-enclosed, fan-cooled, ball-bearing motor, will make cuts up to 6 feet long on material up to 3 inches thick with a 14 inch diamond or abrasive blade; it will also cut 2 inches below grade. The unit features a rugged precision built track; a unique 3-point head mounting for cutting accuracy; simplified cutting depth and water feed controls. The exclusive Cardinal Quik-Voltage Change Over System, 120V-240V, is an optional extra.

Enter U47 on Inquiry Card

Aeroil Products Has New Portable Batch Plant

Aeroil Products Co., Inc. has announced the introduction of their new 6 yd. portable batching plant having a capacity of 40 yds. per hour.

The plant features the use of Man-Ten abrasion resistant steel in the hopper. Beam scales with over/under indicator are furnished as standard equipment. Dial scales are available as optional equipment. The conveyor is 24" wide and has a normal discharge height of 12'. The belt is

mounted on 4" triple troughing idlers with extra idlers provided at the loading point and a belt wiper on the head pulley.

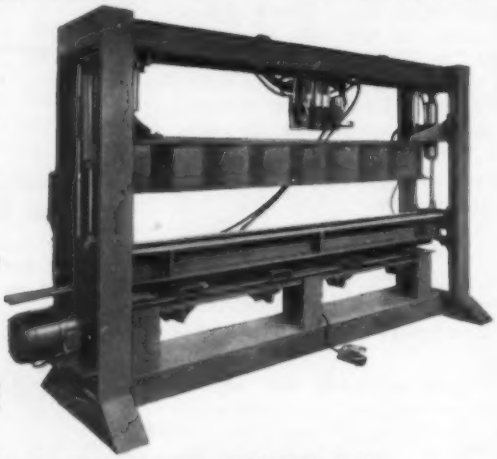
The plant is 4-wheel mounted for portability and is available in either gas engine or electric motor drive. The total weight of the 6 yd. plant is approximately 6,500 lbs.; the overall width is 7 feet and the overall length is 36 feet 6 in.

Further details and literature may be had by writing to Aeroil Products Company, Inc., 17 Wesley Street, South Hackensack, New Jersey.

Enter U48 on Inquiry Card

The Original Lintel Machine Now Has *A BIG BROTHER*

the
LARGER,
MORE RUGGED,
MORE POWERFUL,
FASTER,
MORE PROFITABLE TO OPERATE



KENT HYDRA-LINTELATOR

This machine is capable of faster production of lintels including the U type, sills, fence posts, retaining wall members, parking lot barriers, etc.

The one-piece press head (which requires no changes for different length lintels) and the mold box, are operated hydraulically.

Thorough, uniform compaction throughout the block is assured by a motor drive vibrator shaft carrying four sets of eccentric weights. The intensity of vibration is adjustable for different aggregates.

Lintels up to 11 feet are produced each cycle in sizes 7⅝" by 5⅝", 7⅝", 9⅝" and 11⅝". Use of a divider strip permits making two 7⅝" x 3⅝" lintels each cycle.

Operation is very convenient, with all controls at eye level.

Get literature describing these and several other new features.

The KENT MACHINE CO.

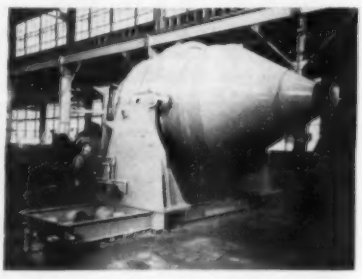
SUBSIDIARY OF THE LAMSON & SESSIONS CO.

CUYAHOGA FALLS, OHIO

The Original LINTELATOR—Proved in many plants, is still available in all sizes. Special literature available.

T. L. Smith Builds 10 Cubic Yard Mixer

Another "first" was recently claimed by the T. L. Smith Company of Milwaukee, Wisconsin and Lufkin, Texas with the construction of what



is believed to be the world's largest tilting mixer. Although this 10-cubic yard capacity model weighs over 53,000 lbs. it will be installed in a portable batching plant of the Replogle Construction Company of Circleville, Ohio.

Three other similar tilters are presently under construction at T. L. Smith for Langenfelder & Sons of Baltimore, Maryland. They will be used in the construction of the new International Airport in Washington, D. C.

Enter U49 on Inquiry Card

Booklet Describes Low Cost Fly Ash Handling

Low-cost fly ash handling methods using pnematic conveyors are detailed in a new 16-page bulletin offered by the Fuller Company.

Designated FF-49-1, the two-color bulletin describes pneumatic systems used in fly ash handling, including the Airslide fluidizing conveyor, Fuller-Kinyon pumping system, and rotary compressor. Control panels, feeders, rotary bin discharge valves, material level indicators, and Fuller-Kinyon pipeline diverting valves are also described. In addition, the bulletin discusses typical installations in leading power companies and in a

concrete block manufacturing process.

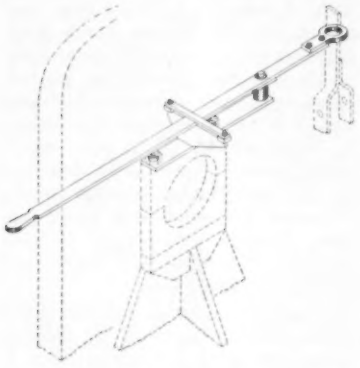
Numerous photographs, including in-plant views of installations, engineering and isometric drawings of handling equipment, and schematic diagrams of installed systems illustrate the new bulletin.

For a copy of Bulletin FF-49-1, write to the Fuller Company, Catasauqua, Pa.

Enter U50 on Inquiry Card

Besser Has New Mixer Clutch Handle Assembly

Mixers of 40 and 50 cu. ft. capacity can be equipped with the new Mixer Clutch Handle Extension Assembly by Besser for added safety and convenience to the mixer-man.



The complete extension assembly, as pictured, is quickly and easily installed on No. 1 position mixers and allows the mixer-man to control the clutch from the charging side of the machine.

The length of the handle and the position of the pivot point permit easy, one-hand operation. Because of added leverage, the clutch may be kept in tighter adjustment.

A clutch handle extension assembly will be available for No. 2 position mixers upon request.

For more information, contact Service Department, Besser Company, Alpena, Michigan.

Enter U51 on Inquiry Card

Forney Announces New Concrete Test Machine

The all new Forney Model FT-20 Jobsite Testing Machine for concrete and concrete products is said to be the most versatile low cost tester ever offered.

Standardly equipped with a manually operated two-stage automatic pump and equipped for testing 6 inch x 12 inch cylinders in compression, a group of reasonably priced accessories are available for conversion to electrical operation; testing concrete blocks; concrete pipe cores; concrete and clay drain tile; cement and concrete cubes; concrete beams and lintels, and compression and modulus of rupture of brick.

For complete information and prices write for Bulletin FT-20 to Forney's Incorporated, Tester Division, Box 310, New Castle, Pa.

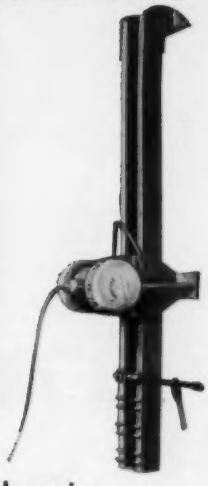
Enter U52 on Inquiry Card

New Batcher Simplifies Cal-Chloride Addition

A calcium chloride weigh batcher, designed to simplify the addition of a standard solution of calcium chloride to concrete mixers at batch plants, has been introduced by the

SYNTRON Unbalanced Motor

CAR SHAKERS



empty hopper cars faster and easier

SYNTRON Sinex Car Shakers empty railroad hopper cars containing sand, gravel and other bulk materials faster, easier and at lower cost than by old fashioned manual methods—eliminate pounding, poking and rodding —greatly reduce labor costs and demurrage.

SYNTRON Sinex Car Shakers are designed with a powerful, electro-mechanical vibrator mounted on a hook type steel frame that attaches to the side of the car. Vibrator is a totally enclosed unit producing 850 powerful vibrations per minute, enough to loosen and shake compacted materials through open hopper gates. Vibrator is pressure tight and water proof.

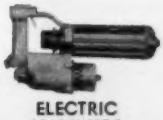
SYNTRON Sinex Car Shakers can speed unloading hopper cars and reduce costs.

Write for free literature today

Other Syntron Equipment of proven dependable Quality

VIBRATORY FEEDERS

CONCRETE VIBRATORS



ELECTRIC HAMMERS

SYNTRON COMPANY
324 Lexington Ave. Homer City, Penna.

C. S. Johnson Company.

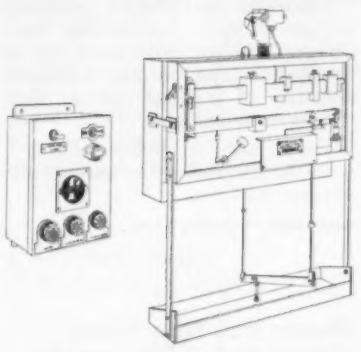
Capacity of the weigh batcher is ample for a 3½ yd. batch with 2 per cent calcium chloride or a 7½ yd. batch with 1 per cent of the solution. Figures apply even when up to 7 sacks of cement per yard are used.

This is how the new weigh batcher works: with the weighbeam set to the weight of the cement in the batch and the ready-to-batch light on, the operator turns the switch to "batch." While the preset quantity of calcium chloride solution is filling the hopper, he weighs up other materials. When a ready-to-discharge light comes on to indicate that the solution has been shut off and that the correct amount of solution is in the hopper, the operator turns the switch to "discharge." Once the hopper is empty of the solution, the ready-to-batch light shows again.

Typical discharge times are 11 seconds for a 4½ gallon batch and 17 seconds for a 9 gallon batch.

One remote control box contains all control switches and indicator lights. The batcher can be wired so as to batch and discharge automatically in combination with other automatic controls.

The hopper for weighing calcium chloride or similar water solutions is



made from 3/16 inch steel plate, has a 2-inch solenoid operated discharge valve and a built-in, sealed float switch to indicate an empty hopper.

The weighing hopper for the solution is suspended from beam scales with hardened knife edges and pivots. The Weighbeam has a graduated scale up to a 145 pound capacity. The Weighbeam also is graduated in pounds of cement for nominal 1 per cent calcium chloride up to 5000 pounds, for 2 per cent to 2,500 pounds. Water to be deducted on the water batcher is automatically indicated in pounds and U. S. gallons. Sealed, snap-action switches are used to indicate full weight and overweight conditions.

A calcium chloride solution pump is available for use with the Johnson weigh batcher. It is a self-priming, 1-inch, marine bronze, gearless model.

Complete information on the calcium chloride weigh batcher can be obtained from distributors or by writing to the C. S. Johnson Company, Champaign, Ill., or the company's branch office at Stockton, Calif.

Enter U53 on Inquiry Card

With DYNA-CHUTE the discharge chute operates automatically. Just flick the control handle and the chute is raised, held or lowered instantly. Save time — keep deliveries on schedule. Thousands in use coast-to-coast. Easy to install and simple to operate. Modernize your existing ready-mix trucks with this safe, automatic speed control. Specify DYNA-CHUTE for your new units. All necessary parts are included to fit standard makes of mixers. See your dealer or write for full details.

MONARCH ROAD MACHINERY COMPANY

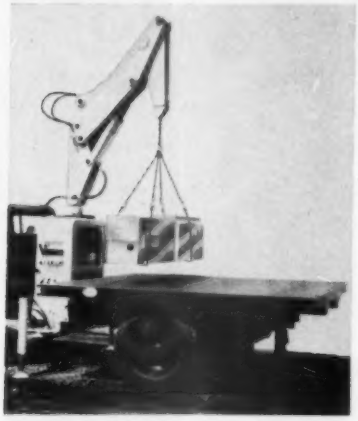
1331 MICHIGAN ST., N. E. — GRAND RAPIDS 3, MICHIGAN

Daybrook Power Loader Has New Power Jib Boom

A hydraulically powered jib boom designed for the Daybrook Power Loader makes possible greater flexibility of use, more speed and the ability to handle heavy bulky materials with precision accuracy where space limitations exist.

The jib boom unit utilizes the same hydraulic system as the standard Daybrook Power Loader, less the winch and cable. It has load capacities ranging to 7,000 pounds maximum for loading a platform truck

or unloading and placing materials at elevated places or at ground or floor level. The boom has a full 360 degree rotation.



The jib boom series will be known as PL6J with Model PL6JST having manual control and Model PL6JRC equipped with remote control. The latter permits the operator to take position at the end of the boom to help guide the load as well as operate the Power Loader. Special boom fixtures or attachments are easily adapted to the jib boom to handle specific materials or do special jobs.

New specification literature is available by addressing request to Daybrook Hydraulic Division, Young Spring & Wire Corporation, Bowling Green, Ohio.

Enter U54 on Inquiry Card

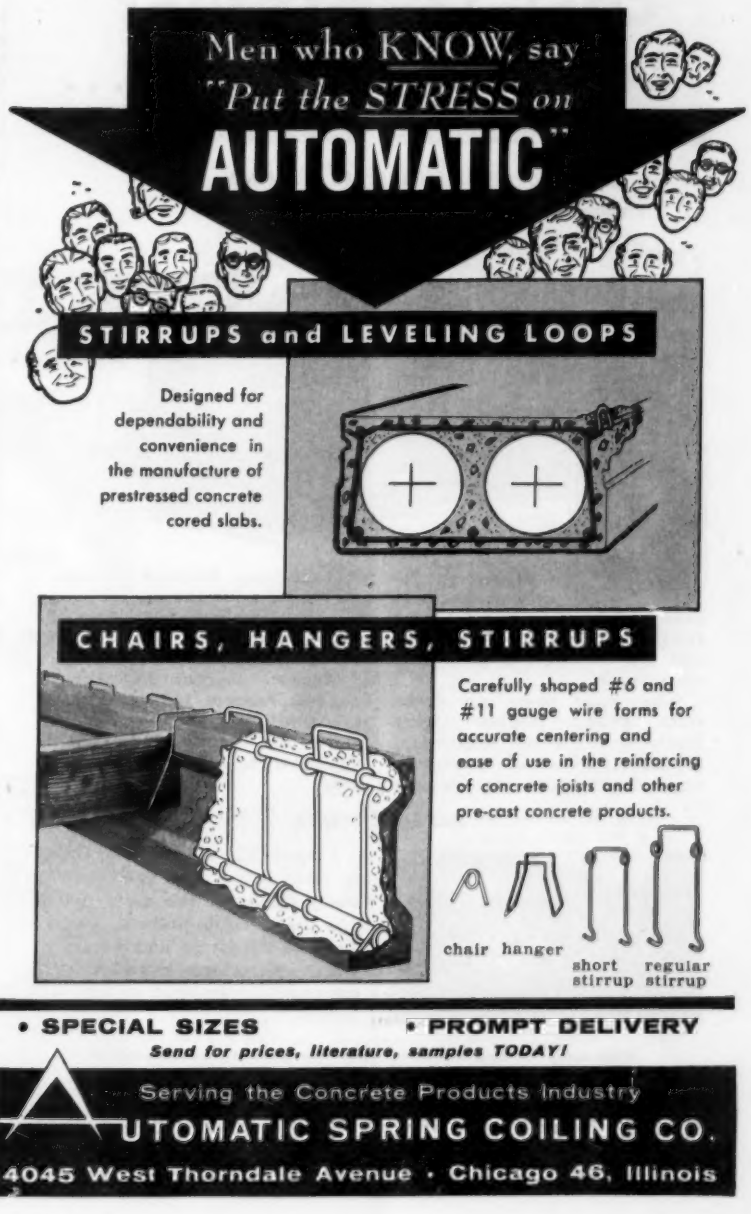
Fruehauf Announces New Pressure Tank Trailer

A new bulk haul Tank-Trailer, capable of pumping aerated powered commodities a distance of 105 feet, or more, has been announced by Fruehauf Trailer Company, Detroit, Michigan.

Fruehauf is presently engaged in filling quantity orders of these pressure tanks to be placed in service for the Spring and Summer construction seasons. This Fruehauf pressure tank, with a 105 to 120 barrel capacity, was primarily designed for transporting bulk cement. The unit is equally suited for any commodity, up to 120 pounds weight per cubic foot, that will work on the Airslide discharge method. Airslide is a trademark of the Fuller Company, Catasauqua, Pa.

Pneumatic unloading is accomplished with a blower mounted on the tractor and connected to the power take-off shaft. An optional discharge method, illustrated, is with the blower mounted on the rear of the pressure tank and activated by a gasoline driven engine. Discharge rate of the Fruehauf pressure tank is 3.33 barrels per minute through a 4-inch hose. At 11 pounds pressure, cement is pneumatically conveyed a distance of 20 feet horizontally and 85 feet vertically directly into a storage elevator. This unit, with modifications in design, can be used for a number of chemicals and powdered solids and discharge them to a height of over 7 stories. Necessity for a cross conveyor and bucket elevator is eliminated. Discharge acceleration is manually controlled at the center outlet of the pressure trailer by a wheel-type valve.

Enter U55 on Inquiry Card


Men who KNOW, say
"Put the STRESS on
AUTOMATIC"
STIRRUPS and LEVELING LOOPS
Designed for dependability and convenience in the manufacture of prestressed concrete cored slabs.
CHAIRS, HANGERS, STIRRUPS
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Send for prices, literature, samples TODAY!
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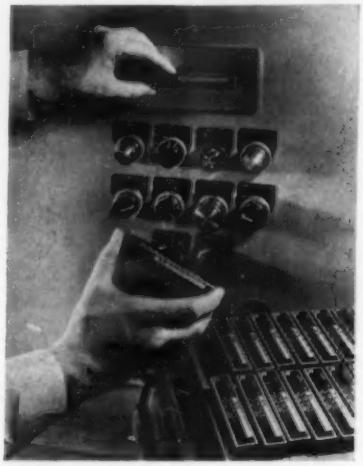
New Automatic Batching Device By Howe Scale

A totally new development in the design and construction of automatic batching equipment has been announced by Howe Scale Company, Rutland, Vermont.

Incorporating a new formula control component called the Howe Batchplug, the new system provides instant formula changing while completely eliminating any human error sometimes present in manual ingredient dialing system. Each standard Batchplug is a self-contained formula, which provides complete preset control for up to ten ingredients per formula. The Batchplug itself is about the size of a pack of cigarettes, ruggedly constructed for heavy industrial use. Each Batchplug has an individual nameplate for quick identification. A convenient rack is available for holding several Batchplugs where a plant uses a number of different formulas for its normal production activities.

A small screw driver is the only tool required to set the Batchplug for proper control over any batching operation. Individual Batchplugs can be accurately sealed within one scale graduation to provide absolute compliance with all local, state or federal



batching regulations. Formula privacy can also be indefinitely retained. No special operator skill is required to adjust or operate the Batchplug and the new batching control system.

Because the Batchplug greatly simplifies electric circuitry and reduces control cabinet size, it provides substantial economies which, in many cases, will bring automatic batching within the range of smaller firms. The Batchplug system can be used in the largest or the smallest automatic batching operations. Five basic Batchplug models are now available to control up to ten ingredients with up to three scales.

Complete details including technical literature and specifications are available from Howe Scale Company, Rutland, Vermont.

Enter U56 on Inquiry Card

COST CONSCIOUS?

Why not join the swing to . . . FRONT ENGINE DRIVE ROCKETS?

FOR MORE ECONOMICAL OPERATION . . .

Many ready-mix operators have learned that Front Engine Drive Rockets cost less initially and less to operate give them more profit.

Why your costs go down with Front Engine Drive Rockets: It's a basic engineering principle that as the work load on a single engine increases, so does efficiency. Friction and wear are minimized in the smooth even flow of power from both ends of engine. Result — less maintenance, less downtime.

Most operators are finding they use less gasoline too, than they would with two engines. For example, one operator reported a minimum savings of $350 per year.

AND EASIER CONTROL...

Finger Tip Control in Cab, so your driver can quickly and easily disengage the mixer drive and transfer full power to truck. Positive discharge and accurate chute placement controls are conveniently grouped at rear of mixer.

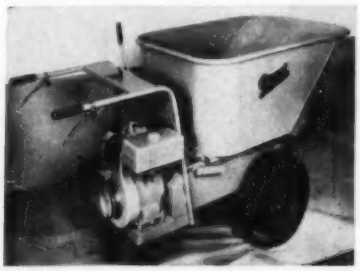
Write today for more information about this great, extra-feature-loaded mixer value that costs less initially, less to operate, less to maintain.

CONCRETE TRANSPORT MIXER CO.
4983 FYLER AVE., ST. LOUIS 9, MO.
FL 2-7600

CTM

Aeroil Announces New 10 Cu. Ft. Power Buggy

Aeroil Products Co., Inc. has announced the introduction of the Model PL-10 Power Buggy.



The bucket has a capacity of 10 cu. ft. and will travel at a maximum

Counter is dash-board mounted. Switch mounted on frame . . . cam actuated by drum.

Qualify for

STATE and FEDERAL truck mixer jobs

Deliver a BETTER MIX . . . . .

Install Durant Productimeter 3-Y-8440 on your trucks to count exact number of mixing revolutions.

- ✓ COUNTER CAN BE CAB MOUNTED FOR EASY CHECKING
- ✓ ROUGH ROAD JARRING WILL NOT "ADD" COUNTS
- ✓ COMPLETE KIT — NOTHING ADDITIONAL NEEDED
- ✓ ENTIRE ASSEMBLY DUSTPROOF AND WATERPROOF
- ✓ DESIGNED FOR 6V. or 12V. SYSTEMS — EASY INSTALLATION

Send for Descriptive Literature

Representatives in Principal Cities

DURANT MANUFACTURING CO.
1957 N. Buffum St., Milwaukee 1, Wis.
57 Thurbers Ave., Providence 5, R.I.

PRODUCTIMETERS SINCE 1879 *Count Everything*

Colored

ready-mixed

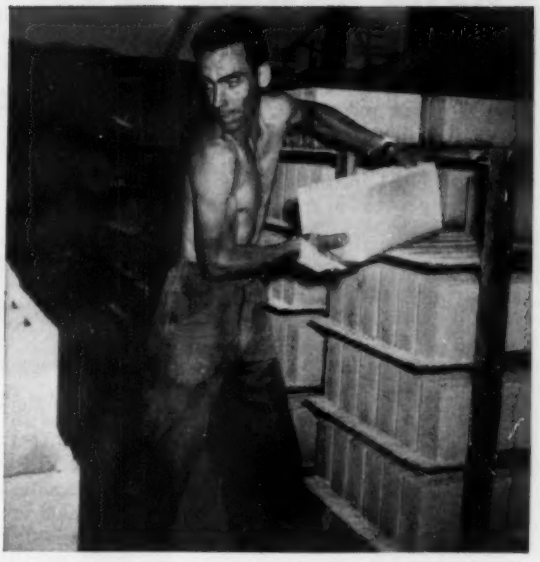
Concrete

10 DIFFERENT COLORS

- ECONOMICAL—costs very little extra per square foot . . .
- DURABLE—color all-the-way through the concrete . . .
- PERMANENT—to weather and sunlight . . .

For further information and color card write to

FRANK D. DAVIS CO.
3285 E. 26th STREET LOS ANGELES 23, CALIF.
eastern office:
P.O. BOX 292 NIXON, NEW JERSEY



EDMONT CASE NO. 619: Handling concrete block and tile, an ordinary plastic coated glove averaged 2 shifts' wear. Edmont's vinyl-coated glove with triple-thick palm (No. 31 Monkey Grip) wore 8 shifts, reducing glove costs from 40c per man-day to 11c.

Job-fitted Edmont outwears ordinary plastic 4 to 1, cuts glove cost 73%

Monkey Grip No. 31
triple-thick palm

Grab-it No. 60W
palm-coated knitwrist

Monkey Grip No. 30
palm-coated knitwrist

The above experience is typical of the savings provided by *job-fitted* gloves. Edmont recommended the No. 31 Monkey Grip for this job because it is the longest wearing glove ever developed for handling concrete products. Its triple-thick palm coating of vinyl plastic has unequalled resistance to abrasion and snagging, excellent grip and will not chip, crack or peel. Edmont's exclusive pattern, with curved, pre-flexed fingers and wing-thumb, gives perfect hand fit, improves dexterity and reduces accidents.

For non-slip grip on bags

EDMONT CASE NO. 511: Handling bagged limestone dust, ordinary plastic coated gloves wore 32 hours. Edmont recommended a rough-finish natural rubber coated glove (No. 60W Grab-it). It gave a more positive grip on the slippery bags, wore 248 hours, and reduced glove costs 78%.

Cool palm-coated glove outwears canvas 5½ to 1

EDMONT CASE NO. 603: Canvas gloves lasted only 1 shift handling concrete block. On the same job, Edmont's No. 30 Monkey Grip gloves, with plastic coated palms, averaged 5½ shifts.

FREE TEST OFFER TO LISTED FIRMS: We make more than 50 different types of job-fitted gloves, including styles and coatings to fit every specialized need of the concrete products industry. Describe your operation and materials handled. Without cost, we will send you recommended gloves for on-the-job comparison testing.

Edmont Manufacturing Company
1206 Walnut Street, Coshocton, Ohio
In Canada write MSA, Toronto

Edmont

Edmont JOB-FITTED GLOVES

speed of 5 mph up a 20 per cent slope with a 1,500 lb. payload. The clutch and brake are operated from one hand level while the operator has throttle control on the other hand lever. Forward and reverse gears are operated by a foot pedal.

The buggy weighs 560 lbs. and is 31 in. wide, 37 in. high and 75 in. long. It is powered by a 6 hp. engine. It is equipped with two 16' x 5.50, 4-ply pneumatic tires mounted on fine lug rims. Two swivel wheels are located in the rear to stabilize turning and provide radius turns.

A flat pallet is available in place of the bucket for hauling bricks, blocks, boxes, etc.

Further information and descriptive literature may be had by writing to Aeroil Products Company, Inc., 17 Wesley Street, South Hackensack, New Jersey.

Enter 857 on Inquiry Card

New Vibrating Screed Is Versatile, Lightweight

The Stow Mfg. Co. has just put on the market a lightweight vibrating screed ideal for striking off narrow spans. Due to its light weight it is very easy to lift up over any obstructions in its path as it is moved along down the prestressed beam.

The new Stow Dus screed consists of a Stow Du vibrator with a ¾ hp. motor and 1-¼ inch head mounted on an aluminum or steel channel with handles on each end. The 9,000 to 12,000 vibrations per minute are transmitted evenly throughout the beam directly to the concrete. Not only does this screed strike off the concrete but it vibrates it at the same time. When not in use as a screed the vibrator can be unbolted and used for vibrating concrete in narrow forms.

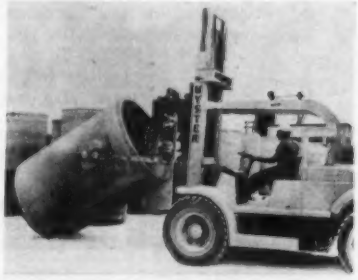
The Dus screed is available in lengths of 4 ft., 5 ft., 6 ft. and 7 ft. . The weight of a 4 ft. Dus screed with an aluminum beam is only 47 lbs. With a steel beam the weight is 77 lbs.

For more information on this new screed write Stow Mfg. Co., 276 Shear St., Binghamton, New York.

Enter U58 on Inquiry Card

Pipe Handling Is Eased With New Hyster Clamp

Pipe handling is simplified and damage reduced through the use of the Hyster Model 120 Load-Grab Clamp equipped with slip-on swivel pads. Pipe can be handled in either the vertical or horizontal position. The swivel pads eliminate damage to pipe in tipping.



The swivel pads can be removed and a third arm installed, a change requiring less than five minutes, for transporting pipe three at a time, the load arms serving as rams. The Slip-on Swivel Pads are secured to the load arms with quick-disconnect lock pins.

The Model 120 Load-Grab Clamp, plus other revolving attachments, is available for installation on Hyster Challenger 15,000, 16,000, 18,000, and 20,000 pounds capacity lift trucks.

For additional information contact your nearest Hyster industrial truck dealer or write to Hyster Company, 1003 Myers Street, Danville, Illinois.

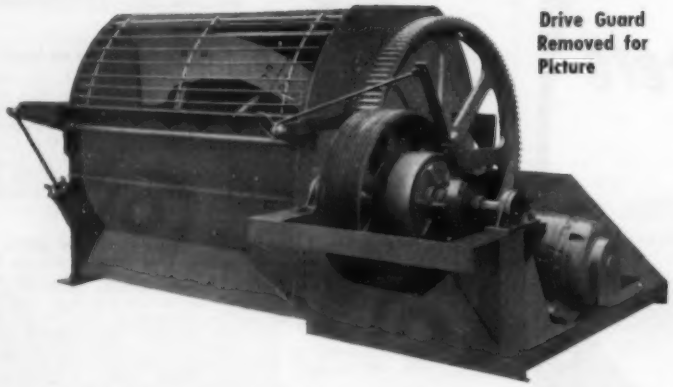
Enter U59 on Inquiry Card

New Hyster Folder On Hystamatic Transmission

A 4-page brochure covering the design and performance features of the new dual-range, fully power-shifted Hystamatic transmission is now available from Hyster Company. The new transmission is a hydraulically shifted, constant mesh unit with integral torque converter. The two

PRASCHAK **75 cu. ft. MIXER**

AMERICA'S POPULAR MIXERS!



Drive Guard Removed for Picture

8 cu. ft. less motor & drive	$750.00
16 cu. ft. less motor & drive	$990.00
21 cu. ft. less motor & drive	$1115.00
30 cu. ft. less motor & drive	$1480.00
50 cu. ft. complete with clutch, 30 HP motor, & drive	$3515.00
75 cu. ft. complete with clutch, 60 HP motor, & drive	$5880.00

(Compare the Mixer, not the price!)

"THE MIXER THAT CAN TAKE IT"

Available from stock with motor, motor mount, & drive, completely assembled.

Available with right or left hand drive

PRASCHAK MACHINE CO. MARSHFIELD, WIS.

TAMMS
AGRASEAL
BRUSH COAT

ONE COAT COVERS

Seals and beautifies concrete all in one application. Better than several coats of ordinary type cement paint! Surfaces sealed with AGRASEAL repel water, oil, alkali, steam, sun, smoke, heat, cold, dampness and frost. Seals the tiniest air holes! Mixes easily with water. Applied easily with scrub brush or short bristle paint brush. Comes in white, cream, grey, green, brick red, light buff, sunny yellow, mint green, peach and coral pink.

Write for Color Card and FREE SAMPLES

TAMMS INDUSTRIES CO.
228 North La Salle Street
Chicago 1, Illinois

NEW FRANCHISE AVAILABLE

Your territory may still be open for Stock Stopper Cattle Guards*, a brand-new item that converts waste cement into high profits, requires no finishing.
GET THE FACTS NOW—nearly 150 licensees are already doing big volume with Stock Stopper because it's unique in a market that's never been tapped: Every ranch, farm and suburban home is a prospect.

*Pat. pending

Complete "package" Cattle Guard sells easily —direct or thru dealers. Nationally-advertised!

At VERY LOW COST we supply easy-stripping metal forms for Stock Stopper reinforced concrete beams, as well as pre-cut pressure-treated hardwood treads. Every unit you sell means PLUS VOLUME with little or no increase in your labor or overhead. We furnish advertising and sales-aids.

Cattle Guards, 26 South Perry St.
Montgomery, Alabama

Rush complete details on your franchise.

NAME .....

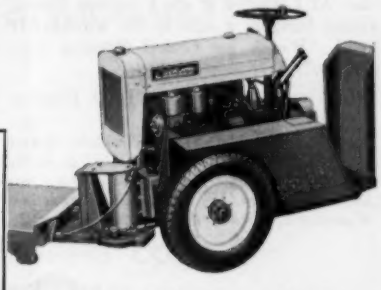
ADDRESS .....

put the *Erickson* "workhorse team" to work in *your* plant!

ERICKSON FK-60 FORK LIFT TRUCK

Here's the pair of Ericksons that have proven themselves the BACKBONE OF BLOCK PRODUCTION. Erickson's rugged dependability and long life have won its reputation as "the workhorse of lift trucks". Erickson trucks are custom-built to fit your needs.

ERICKSON AR-TIC-U-LATED PLATFORM TRUCK



OVER 1,000 BLOCK PLANTS cut costs with *Erickson*

The ideal truck for the concrete industry—equipped with Side-shifter, Triple Lift Mast and Cubing Forks. Ericksons have a proven 30-year record for low-cost handling of cubed blocks in the yard—stockpiling, loading and unloading delivery trucks.

A revolutionary new idea for speed and maneuverability handling heavy loads in close quarters. This new Erickson is AR-TIC-U-LATED—with a pivot between platform and drive wheels which gives the advantage of 4-wheel steering. Platform beds up to 15 feet long.

ERICKSON POWER LIFT TRUCKS, Inc.
221 St. Anthony Blvd. N. E. • Minneapolis 18, Minn.

Dodson's Digest

First sign of spring

Driving home from work a few weeks back a detour took me into a part of town I hadn't visited in some time. It had sprung into a beehive of small businesses, and a sign, *Concrete Specialties Company*, caught my eye — so I stopped (naturally) and went in.

"Anybody around?" I yelled. The vacant, high-vaulted shop answered with the crash of concrete thudding into a truck from somewhere out back. "Name's Dodson," I explained quickly to a sweating young giant who appeared suddenly as I rounded a corner. "I'm with . . . "

"You're with Wyandotte." His face broke into a wide friendly smile as he mopped it with a piece of waste. "You push Calcium Chloride. I read your stuff in . . . "

"Looks like you don't use it," I interrupted sternly, motioning to the huge pile of broken concrete he'd been loading.

"But, Mr. Dodson, this . . . "

"No buts!" I exclaimed. "With Calcium Chloride you get less breakage, better product appearance. Higher early strength cuts curing time in half! You slash costs because you have more productive capacity . . . "

"But, Mr. Dodson, we . . . "

"And it protects concrete in cold weather!" I kept on.

"WAITAMINUTE!" His shout filled the small building. "This pile is just an old slab we broke up. Everything you say about Calcium Chloride is gospel. But I don't need it now."

Shaking my head I went back to the car. As I started it up, I noticed Young Giant hanging a sign in the window. It read, *"Watch for Grand Opening next spring."*

— L. D. Dodson

P.S. — Our booklet, "How To Make Better Concrete Products and Ready Mix," gives the lowdown on higher profits. Send for your free copy. *Wyandotte Chemicals Corporation, Wyandotte, Mich. Offices in principal cities.*

Wyandotte CHEMICALS

MICHIGAN ALKALI DIVISION

HEADQUARTERS FOR CALCIUM CHLORIDE

speed ranges forward and reverse are operator-selected by means of levers. All components are confined in a single housing mounted to the engine as an integral part of the power train. Transmission is available as optional equipment for the recently announced Hyster pneumatic tire Challenger lift truck series in the 6000-8000 pound capacity range.

Transmission features covered that result in high truck productivity include automatic power adjustment to road and load conditions, no complex gear synchronizing, elimination of lugging and stalling, combined inching and braking pedal, simplified servicing, and complete operating safety. A cutaway showing transmission components is also included.

For your copy contact your nearest Hyster industrial truck dealer or write to Hyster Company, 1003 Myers Street, Danville, Illinois.

Enter U60 on Inquiry Card

$630 Billion Building Boom Seen In Ten Years

The construction industry is in for a spectacular $630-billion boom during the next decade, the building magazine Architectural Forum said on March 9.

By 1968, according to Forum economist Miles Colean, spending for new construction will reach a whopping $75-billion a year, a rise of 53 per cent over last year's mark. The magazine adds that its projections for the next decade "may be too modest." They are based on conservative productivity and population increases, both of which could well exceed estimates, thereby sending the building figure even higher.

The magazine expects some sectors of construction to advance more rapidly than the 53 per cent increase predicted for all building. Industrial building is expected to rise 117 per cent in the next decade, and by 1968 should be booming at a rate of $5 billion a year in new expenditures. Store building, restaurants, and garages will also show higher-than-average expansion, rising about 76 per cent by 1968 to $2.8 billion a year. Nonresidential construction as a whole will rise considerably more (66 per cent) than private residential construction (45 per cent). Annual spending for new dwelling units should rise about 42 per cent.

Public construction will generally show more expansion than private building during the next decade. Highway construction will continue to boom, and by 1968 will total $9.5 billion a year, a rise of 77 per cent above last year's level. School building should rise at least 51 per cent and could gain even more if the federal aid programs now being discussed are passed by Congress. Hospital construction will rise 75 per cent, and building of administration and service facilities 51 per cent by 1968.

MANUFACTURERS' NOTES

J. I. Case Company, Racine, Wis., has apointed Lawrence H. Hodges as manager of its Rockford, Ill., works, and has named Robert J. Nixon to a management staff position at its headquarters in Racine.

■

Martin-Decker Corp., Long Beach, Calif., announces the promotion of Clayton L. Howard, former sales engineer, to the position of industrial sales manager. Mr. Howard has been with the company since 1954.

■

Joy Manufacturing Co., Pittsburgh, Pa., has established a district office in Philadelphia, Pa., at 1420 Walnut St. It will serve Joy's Industrial Division customers in portions of Pennsylvania, New Jersey, Maryland, Delaware, Virginia, West Virginia and the District of Columbia. Richard H. Schlobohm has been appointed district manager.

■

Tote System, Inc., Beatrice, Nebr., has named William Ryan of Modern Materials Handling Co., 3300 S. Seventh St., St. Louis 18, Mo., as manufacturers' representative for Tote's complete line of materials handling equipment.

■

Schield Bantam Co., Waverly, Iowa, has announced the election of Buel M. Wallis as a vice president and officer of the company. Mr. Wallis, who will function as director of marketing, joined the company in April 1955 as general sales manager. He was additionally honored recently by election as a director of the Construction Industry Manufacturers Association.

JUST OFF THE PRESS

NEW ENLARGED SECOND EDITION

Manufacture of

CONCRETE MASONRY UNITS

by WILLIAM GRANT

More Pages • More Subjects Covered • More Illustrations Charts and Tables • More of Everything that Made the First Edition the Most Popular Book on the Subject Ever Offered the Block Producer.

$5.00
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ORDER YOUR COPY TODAY

CONCRETE PUBLISHING CORP.
400 WEST MADISON ST.
CHICAGO 6, ILL.

SEND CHECK OR MONEY ORDER — NO CURRENCY

CLASSIFIED ADS

$10.00 per column inch. Closing date for classified advertising copy is 15th of preceding month.

WANTED TO BUY

Three 12" used concrete pipe forms. Three to Five 15" Concrete Pipe forms. Tongue and groove or Bell end, 4 ft. long.

H. N. SCARBOROUGH

5706 Shepard Rd., Ashtabula, Ohio.

WANTED

Twenty-five hundred plain pallets for Model 8 Machine. The size required is 18" x 18" x ¼".

HANCOCK CONCRETE PRODUCTS COMPANY
Montevideo, Minnesota.

FOR SALE

One Champion Drain Tile Machine — with attachments to make 4" to 8" tile. Good Condition. $650.00

One Multiplex Five Block Machine and Pallets. $150.00

PYRAMID BLOCK CO.
Goreville, Ill.
Phone: WY 3-2281

PLAIN PALLET BLOCK MACHINE FOR SALE

We have recently taken several Fleming-180 Automat'c Block Machines on trade. They are being offered for sale at $1200—$1600 complete. For DETAILED information contact:

FLEMING MANUFACTURING COMPANY
Cuba, Missouri.

PLAIN PALLET CLEANING

We truck our machine to your plant and supervise entire cleaning and planing off of pallet residue. No need to shut down as we will keep up with production.

EDWARD A. LOBSTEIN
31521 Cyril Drive Fraser, Michigan.
Phone: Prescott 2-1135

FOR SALE

One 2-compartment, 23 ton Winslow Binanbatch equal compartment—each 11½ tons with 25 cu. ft. weight batcher. Excellent condition. In use only one week. Price $1500.00 f.o.b. Orange, New Jersey

MEAD-SUYDAM COMPANY
400 Sheridan St., Orange, New Jersey

FOR SALE

Kent Twin Block Machine
Front Pallet Feed
Magnetic Offbearer
1,500 Pallets
40 Racks

1 - Marion ¾ Yard Crane - $3,500.00

PUNTA GORDA READY MIXED CONCRETE, Inc.
520 King Street Punta Gorda, Florida.

FOR SALE

CONCRETE TRUCK MIXERS

(as is — subject to prior sale)

3 Jaegers — two to four yd. capacity — $300.00 each.

2 Smiths — three to four yd. capacity — $300.00 each.

1 Willard — three cu. yd., 1932 Chevrolet — $1800.00

CONCRETE TRANSPORT MIXER CO.

4983 Fyler Ave., St. Louis 9, Mo.

PHONE: FLanders 2-7800

HERE'S A CHANCE TO BUY COMPLETE BLOCK-MAKING EQUIPMENT REASONABLY PRICED

Two-block hydraulically-operated block machine with seven molds (including chimney & barrel), 28 ft. mixer and skip hoist, approx. 2200 pallets (18 x 18) and approx. 65 three-bay racks. In good operating condition. Located in Virginia. Contact:

BERGEN MACHINE & TOOL CO., INC.
189 Franklin Ave., Nutley, N.J.

FOR SALE

Besser Vibrapac Block Machine (Victory Model) in excellent running condition. Makes 2400-8", 4800-6" or 7200-4" blocks in one eight hr. shift. These mold boxes plus 3500 plain steel pallets, 25 cu. ft. mixer and skip loader, 68 racks and hand rack truck plus some miscellaneous extra parts all for $15,000.00 F.O.B. Eureka. Call or write:

JOHN D. DOW
(DOW BLOCK CO.)

Eureka, Calif. Phone: Hillside 2-6961

BEST BELT BUYS

2500-3000 lbs. cover tensile, 16-19 lbs. friction pull, brand new. Three weeks delivery.

14"	4 ply	28 oz.	⅛"	x 1/32"	$2.43
16"	4 ply	28 oz.	⅛"	x 1/32"	2.74
18"	4 ply	28 oz.	⅛"	x 1/32"	3.04
18"	4 ply	28 oz.	⅛"	x 1/16"	3.20
20"	4 ply	28 oz.	⅛"	x 1/32"	3.32
24"	4 ply	28 oz.	⅛"	x 1/32"	3.92
24"	4 ply	32 oz.	⅛"	x 1/16"	4.14
30"	4 ply	32 oz.	⅛"	x 1/16"	5.08

Samples or other sizes quoted on request. Distributorships available.

PALTECH COMPANY
Thayer Pond Road New Canaan, Conn.
Phone: Woodward 6-4073

PALLET CLEANING

No Need to Shut Down — Latest Type Machine Serving the South at Your Plant.

SOUTHEASTERN PALLET CLEANING SERVICE
5920 Terry Parker Drive North
Jacksonville, Florida.

PHONE: RAymond 4-4676 or ELgin 6-7957

SUPERIOR

MULTI-MOLD LINTEL MACHINE POINTS THE WAY TO GREATER

PROFITS FOR YOU!

- **Reduces man-hours per lintel.**
- **Low investment — high returns.**
- **Adaptable to many linear shapes.**
- **Hi-Quality — all welded construction.**
- **Capacity up to 120 linear feet.**
- **Interchangeable base pallets.**
- **Fast — Neat — Clean.**

USED Throughout The Concrete Trade To Produce:

1. **Consistant Hi-Quality products.**
2. **A cleaner, smoother, stronger product.**
3. **Up to 120 linear feet in one pour.**
4. **A variety of linear shapes.**

GET DETAILS TODAY

SUPERIOR CONCRETE MCHY. CO.
1892 ANDOVER RD. COLUMBUS 12, OHIO

SMITHKO CEMENT COLORS

- **The Standard of Comparison for Nearly Forty Years**
- **65 Shades to Choose From Including Many New Colors**

Send For Latest COLOR CARD, Samples, Technical Brochure, and Quotations.

SMITH CHEMICAL & COLOR CO.
53-57 John St., Brooklyn 1, N.Y.

INVENTORS AND MACHINE DESIGNERS

National manufacturer is desirous of obtaining manufacturing and sales rights on any equipment or improvements used in concrete products plants on a royalty or outright purchase basis. Patents not essential. Protection guaranteed.

Address: Box E-4, care CONCRETE
400 W. Madison St, Chicago 6, Ill.

PALLET CLEANING

We have the most modern machines in use and can do your pallet cleaning to meet your work schedule. There is no extra charge for transporting our machines as they move on our own trucks.

EASTERN PALLET CLEANING, INC.
2424 95th Street North Bergen, New Jersey
Phone: Union 9-0260

SWAP — SELL — BUY
BLOCK MACHINES

Stearns #7 & 9 Joltcretes (Joltcrete owners at this price buy one for spare parts.)	$ 500.00	each
Mold Boxes #7 & 9	150.00	each
2 Air Offbearers Stearns #7 & 9	250.00	each
2 Hand Lift Trucks	175.00	each
1 Lithibar 2-Block Machine complete with 1000 plain steel pallets 18" x 22"	2900.00	
1 Stearns 28 cu. ft. Mixer. Good condition with motor	$1000.00	
100—Racks for cored steel pallets	10.00	each
100,000 pressed steel pallets in stock (Send tracing or sample for quotation).		

WRITE • WIRE • PHONE
Mr. McCaughey

Send in list of equipment you need. If we don't have it in stock, we usually know where we can find it at a bargain.

GENERAL ENGINES CO., INC.
Route 130 Thorofare, N.J.
PHONE: Tilden 5-5400

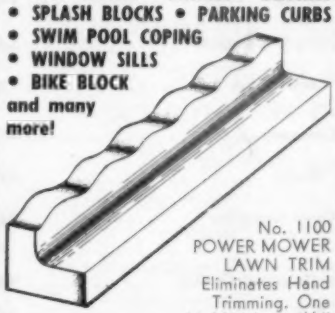
Labor Saving! Long Lasting!

Easy-to-Strip METAL FORMS FOR CONCRETE PRODUCTS

Hundreds in Stock, Including:

- STEP STONES • LINTELS • BENCHES
- SPLASH BLOCKS • PARKING CURBS
- SWIM POOL COPING
- WINDOW SILLS
- BIKE BLOCK

and many more!



No. 1100
POWER MOWER
LAWN TRIM
Eliminates Hand
Trimming. One
Mold 36"x6"x5½"

SWISS FORM OIL | PD CONCRETE INSERTS
BURIAL VAULT FORMS | VIBRO EQUIPMENT

Write for Illustrated Catalog. Prompt Delivery on Special Forms.

R. L. SPILLMAN CO.
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CLASSIFIED ADVERTISING IN *CONCRETE* MOVES USED EQUIPMENT FAST!

E. L. CONWELL & CO.

Established 1894

ENGINEERS • CHEMISTS

INSPECTORS

Cement, Chemical and Physical Laboratories
Tests of Cement, Concrete, Sand, Steel, Cement Block, Cement Brick.
Chemical Analyses of All Commercial Products. Complete Technical Supervision of Central Mixed Concrete Plants.

2024 ARCH ST. • PHILADELPHIA, PA.

WANTED

Representative actually calling on concrete block industry to represent substantial processing equipment on commission to large block manufacturers. Must be thoroughly familiar with processing methods of the industry. Responsible manufacturer, attractive proposition, territorial protection. For full details Address:

Box A-51, care CONCRETE

400 W. Madison St. Chicago 6, Ill.

COLORS *For Cement and Concrete*

COLOR YOUR CONCRETE WITH LANSCO CEMENT COLORS, available in 40 ATTRACTIVE shades. Suitable for all types of concrete products. Write for our new color card, copy of "Suggestions For Using Cement Colors," and for free samples and price list.

Manufactured by:

LANDERS-SEGAL COLOR CO.
76 Delevan St. • Brooklyn 31, N.Y.

FOR SALE

Complete Ready Mix plant's five yard Batcher, dial scales, water pump and meter. Delivered and set up in your yard — $6,850. Thirty trucks with Challenge, Rex, Smith, and Jaeger mixers, $1,800 to $8,000 each. Hough and Michigan front end loaders. Complete sand and gravel washing plants. Two 8 x 125 Autoclaves — complete with boilers.

WESTERN EQUIPMENT SALES ENGINEERS
7824 Pershing Blvd., Kenosha, Wisc.
PHONE: Olympic 2-1743 or 4-8755

PALLETS NEED CLEANING?

Our operator trucks cleaner to your plant. Approximately 300 plain steel pallets in popular sizes cleaned per hour. No interruption in production.

FRASER PALLET CLEANING
Rine Pries-Gerard DeVolder-Glen Schroeder
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PHONE: PRescott 2-9722

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Cardinal Scales

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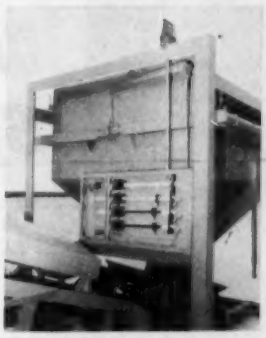

CARDINAL SCALE Installation
Photo courtesy Ross-Porta-Plant Brownwood, Texas

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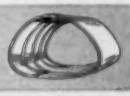
No Matter What SHAPE...



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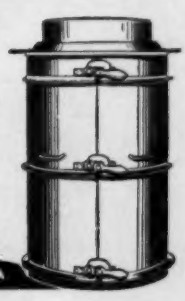

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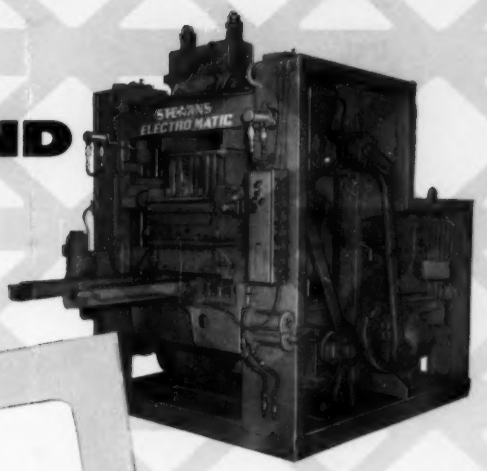
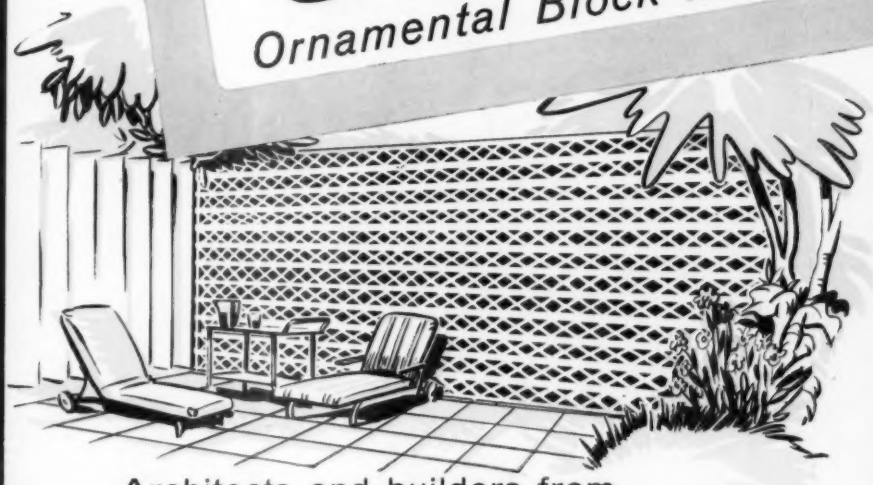


with STEARNS Ornamental Block Molds



Architects and builders from coast to coast are specifying ornamental block . . .

Be sure YOU can supply the right concrete block for the newest, most exciting trend in architectural history —ornamental block. Stearns stylized block molds provide thousands of varied patterns for modern curtain walls, patio walls, decorative walls both inside and out, plus many other applications. Write Stearns today for further information.

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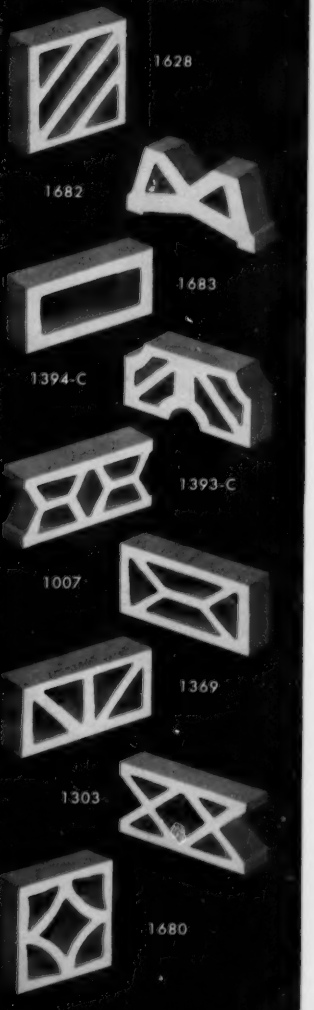
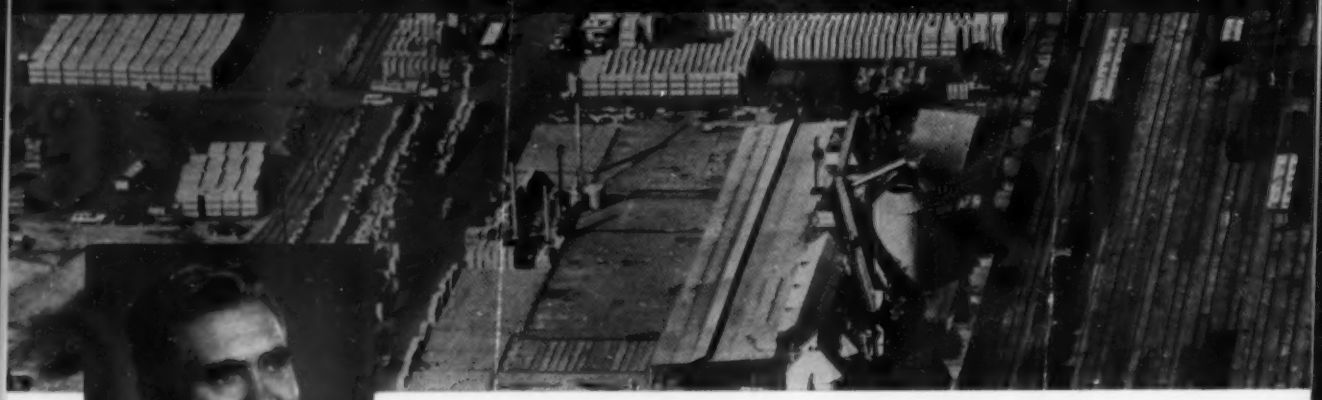


WORLD'S LARGEST SHIPMENT OF CONCRETE BLOCK MACHINES

8 New Besser Vibrapacs headed for Superlite plant, Phoenix, Arizona



Superlite General Manager "Coach" Thomas says:

"If we hadn't switched from our original machinery to the Besser Vibrapac, I sincerely do not think our company would have prospered and grown to its present magnitude. With the original machinery, we showed so much downtime that we were in the red. Since installing Besser Vibrapacs, we have not shown a loss after the first month of operation. We have had wonderful cooperation from the Besser Company and feel that the Besser Vibrapac is the answer to our success."

The world's largest concrete block plant, Superlite Builders' Supply Company of Phoenix, Arizona, recently received the world's largest shipment of block machines — 8 new Besser Vibrapacs. Each machine is fully automatic including feed control, height and density control, lubrication, and cam-operated pallet cleaner.

The company now operates 12 Vibrapacs in a row at their Phoenix plant and consumes 32 carloads of material every 24 hours.

The history of Superlite is an amazing success story. Starting 14 years ago, with an investment of only $3500, the company has grown by leaps and bounds. Today, Superlite has a capacity of 240,000 block per day — *enough to build 100 three-bedroom homes per day.*

Besser Vibrapacs were selected because of their ability to produce high-quality block continuously, day-in and day-out, *without downtime.* These modern machines can do the same for you. Write for literature, or contact the Besser representative in your area.

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